A/70/20

United Nations

Report of the Committee on the Peaceful Uses of Outer Space

Fifty-eighth session (10-19 June 2015)

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United Nations • New York, 2015

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ISSN 0255-1144

[26 June 2015]

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Chapter I

Introduction

1. The Committee on the Peaceful Uses of Outer Space held its fifty-eighth session in Vienna from 10 to 19 June 2015.

2. At its 690th meeting, on 10 June, the Committee elected Rosa Olinda Vásquez Orozco (Ecuador) as First Vice-Chair of the Committee, to replace Diego Stacey Moreno (Ecuador), who had been elected for the office for the period 2014-2015.

3. The officers of the Committee were as follows:

Chair:	Azzedine Oussedik (Algeria)
First Vice-Chair:	Rosa Olinda Vásquez Orozco (Ecuador)
Second Vice-Chair/Rapporteur:	Xinmin Ma (China)

A. Meetings of subsidiary bodies

4. The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space held its fifty-second session in Vienna from 2 to 13 February 2015, under the chairmanship of Elöd Both (Hungary). The report of the Subcommittee was before the Committee (A/AC.105/1088).

5. The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space held its fifty-fourth session in Vienna from 13 to 24 April 2015, under the chairmanship of Kai-Uwe Schrogl (Germany). The report of the Subcommittee was before the Committee (A/AC.105/1090).

B. Adoption of the agenda

6. At its opening meeting, the Committee adopted the following agenda:

1. Opening of the session.
2. Adoption of the agenda.
3. Statement by the Chair.
4. General exchange of views.
5. Ways and means of maintaining outer space for peaceful purposes.
6. Report of the Scientific and Technical Subcommittee on its fifty-second session.
7. Report of the Legal Subcommittee on its fifty-fourth session.
8. Space and sustainable development.
9. Spin-off benefits of space technology: review of current status.
10. Space and water.

11. Space and climate change.

12. Use of space technology in the United Nations system.

13. Future role of the Committee.

14. Other matters.

15. Report of the Committee to the General Assembly.

C. Membership

7. In accordance with General Assembly resolutions 1472 A (XIV), 1721 E (XVI), 3182 (XXVIII), 32/196 B, 35/16, 49/33, 56/51, 57/116, 59/116, 62/217, 65/97, 66/71, 68/75 and 69/85 and decisions 45/315, 67/412 and 67/528, the Committee on the Peaceful Uses of Outer Space was composed of the following 77 States: Albania, Algeria, Argentina, Armenia, Australia, Austria, Azerbaijan, Belarus, Belgium, Benin, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Chad, Chile, China, Colombia, Costa Rica, Cuba, Czech Republic, Ecuador, Egypt, France, Germany, Ghana, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Jordan, Kazakhstan, Kenya, Lebanon, Libya, Luxembourg, Malaysia, Mexico, Mongolia, Morocco, Netherlands, Nicaragua, Niger, Nigeria, Pakistan, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Senegal, Sierra Leone, Slovakia, South Africa, Spain, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Venezuela (Bolivarian Republic of) and Viet Nam.

D. Attendance

8. Representatives of the following 66 States members of the Committee attended the session: Albania, Algeria, Argentina, Australia, Austria, Belarus, Belgium, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czech Republic, Ecuador, Egypt, France, Germany, Ghana, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Jordan, Kenya, Lebanon, Luxembourg, Malaysia, Mexico, Mongolia, Morocco, Netherlands, Nicaragua, Nigeria, Pakistan, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Slovakia, South Africa, Spain, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Turkey, Ukraine, United Kingdom, United States, Venezuela (Bolivarian Republic of) and Viet Nam.

9. At its 690th meeting, on 10 June, the Committee decided to invite, at their request, observers for Angola, the Dominican Republic, El Salvador, Israel, Kuwait, Mauritania, Oman, Panama, Qatar, Sri Lanka and the United Arab Emirates, as well as the Holy See, to attend its fifty-eighth session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.

10. At its 691st meeting, on 10 June, the Committee decided to invite, at its request, the State of Palestine, to attend its fifty-eighth session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.

11. At its 690th meeting, on 10 June, the Committee decided to invite, at the request of the Sovereign Military Order of Malta, the observer for that organization to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.

12. At the same meeting, the Committee decided to invite, at the request of the European Union and the League of Arab States, the observers for those organizations to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.

13. Observers for the Economic and Social Commission for Asia and the Pacific (ESCAP), the Office for Disarmament Affairs of the Secretariat, the International Civil Aviation Organization (ICAO) and the International Telecommunication Union (ITU) attended the session.

14. The session was attended by observers for the following intergovernmental organizations with permanent observer status with the Committee: Asia-Pacific Space Cooperation Organization (APSCO), European Organization for Astronomical Research in the Southern Hemisphere (ESO), European Space Agency (ESA), European Telecommunications Satellite Organization (EUTELSAT-IGO), Inter-Islamic Network on Space Sciences and Technology (ISNET), International Mobile Satellite Organization (IMSO), International Telecommunications Satellite Organization (ITSO) and Regional Centre for Remote Sensing of North African States (CRTEAN).

15. The session was also attended by observers for the following non-governmental organizations with permanent observer status with the Committee: African Association of Remote Sensing of the Environment, European Space Policy Institute (ESPI), International Academy of Astronautics (IAA), International Astronautical Federation (IAF), International Institute for Applied Systems Analysis (IIASA), International Institute of Space Law (IISL), International Society for Photogrammetry and Remote Sensing (ISPRS), Prince Sultan bin Abdulaziz International Prize for Water (PSIPW), Secure World Foundation (SWF), Space Generation Advisory Council (SGAC) and World Space Week Association (WSWA).

16. A list of representatives of States members of the Committee, States not members of the Committee, United Nations entities and other organizations attending the session is contained in A/AC.105/2015/INF/1 and Corr.1.

E. General statements

17. Statements were made by representatives of the following States members of the Committee during the general exchange of views: Algeria, Argentina, Austria,

Brazil, Canada, Chile, China, Costa Rica, Cuba, Czech Republic, Ecuador, Egypt, France, Germany, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Luxembourg, Mexico, Mongolia, Pakistan, Poland, Portugal, Republic of Korea, Romania, Russian Federation, South Africa, Switzerland, Thailand, Tunisia, United States and Venezuela (Bolivarian Republic of). Statements were also made by the representative of Chile on behalf of the Group of 77 and China and by the representative of Panama on behalf of the Group of Latin American and Caribbean States. A statement was made by the representative of Luxembourg, together with the observer for the European Union, on behalf of the European Union. Statements were also made by the observers for El Salvador, Israel, Oman, Sri Lanka and the United Arab Emirates. The observers for African Association of Remote Sensing of the Environment, APSCO, CRTEAN, IAA, IAF, ISNET, ESA, ESO, ESPI, EUTELSAT-IGO, SGAC and SWF also made statements.

18. At the 690th meeting, the Chair delivered a statement highlighting the role played by the Committee and its Subcommittees as a unique global platform for enhancing the capacity of States to promote economic, social and cultural development through the use of space tools. He emphasized the need to: (a) foster the active participation in the Committee of each of its member States, from all geographical regions, and promote dialogue with its observer organizations; (b) advance the role of the Committee as the prime intergovernmental global platform for international cooperation in space activities; (c) strengthen the role of the Office for Outer Space Affairs of the Secretariat in providing support for the orderly conduct of space activities; and (d) enhance the interrelationship between the Committee and coordination mechanisms at the regional and interregional levels as a means for the Committee to lead the way towards global space governance for the benefit of all humanity.

19. At the same meeting, the Director of the Office for Outer Space Affairs made a statement in which she reviewed the work carried out by the Office during the previous year, including outreach activities and cooperation and coordination with United Nations entities and international intergovernmental and non-governmental organizations. She stressed the current unfavourable financial situation of the Office and highlighted the importance of the availability of financial and other resources for the successful implementation of the programme of work of the Office. The situation required addressing its human resources shortfall, and the Director called on Member States to consider supplementing the Office's regular budget with extrabudgetary resources, both monetary and in kind. The Director highlighted the role of the Office in discharging the responsibilities of the Secretary-General under the United Nations treaties on outer space and in maintaining the Register on Objects Launched into Outer Space under the obligations set out in the Convention on Registration of Objects Launched into Outer Space. The Register was the Convention's core mechanism for creating transparency and building confidence in outer space activities. She also described the Office's work in coordinating activities among United Nations entities in the areas of sustainable development, global health, emerging issues in commercial space transportation and regulatory aspects of small satellites as examples of the successful implementation of the mandate of the Office to lead the Inter-Agency Meeting on Outer Space Activities (UN-Space).

20. At its 693rd meeting, the Committee invited the Director-General of the United Nations Office at Vienna and Executive Director of the United Nations

Office on Drugs and Crime, Yury Fedotov, to make a statement. He highlighted that addressing the challenges to humanity and sustainable development on Earth were closely linked to the Committee's agenda, including protecting the space environment and securing the long-term sustainability of outer space activities, and that the importance attached by the international community to promoting international cooperation on those issues was increasing substantially. The Committee and the Office for Outer Space Affairs played an important role in that regard. The Director-General expressed his commitment to supporting the Director of the Office for Outer Space Affairs in fostering the Committee as a unique global platform. He underscored that the development agenda required effective and innovative tools to support its implementation, including those offered by space science and technology applications.

21. The Committee welcomed Luxembourg as a new member. The African Association of Remote Sensing of the Environment was welcomed as the newest permanent observer.

22. The Committee congratulated the United States on the twenty-fifth anniversary of the Hubble Space Telescope mission.

23. The Committee was honoured with the presence of cosmonaut Alexey A. Leonov (Russian Federation), who addressed the Committee on the occasion of the fiftieth anniversary of the first spacewalk performed by a human.

24. The Committee noted with satisfaction that 2015 also marked the tenth anniversary of the African Leadership Conference on Space Science and Technology for Sustainable Development, a regional conference to promote intra-African cooperation on the uses of space science and technology to support development in Africa.

25. The Committee also noted with satisfaction the tenth anniversary of the International Committee on Global Navigation Satellite Systems (ICG), and commended the outstanding work of the Office for Outer Space Affairs, which had been serving as the executive secretariat of ICG since its establishment.

26. The Committee noted with appreciation that the Office had developed and launched its new website, which had been designed to better serve the Member States and to raise awareness of the work of the Office, and was a great improvement in terms of the design, navigation and access to information, and multimedia additions.

27. The Committee observed a minute of silence to mark the passing in May 2015 of Yuri Kolosov (Russian Federation), who had been a long-standing delegate to the Committee and a dedicated contributor to the development of international space law.

28. The Committee noted with appreciation the holding of the following events on the margins of the session:

(a) Panel discussion on satellites and climate change, organized by France;

(b) "The Hubble Space Telescope, 25 years of cosmic discovery", lecture by Jennifer Wiseman, Senior Scientist for the Hubble Space Telescope, held at the Natural History Museum, Vienna;

(c) Special talk by Sandra Magnus, astronaut from the United States, on the subject of women and girls in science, technology, engineering and mathematics;

(d) Painting exhibition on China's space exploration: "Flying with the wings of art";

(e) Evening event organized by ESPI and the national point of contact Space Law Austria entitled "United States and European geospatial data policies: challenges of open data policy".

29. The Committee heard the following presentations:

(a) "New cooperation programme 'Kibo-CUBE': invitation to CubeSat deployment into orbit from the Japanese Experiment Module (Kibo) of the International Space Station", by the representative of Japan;

(b) "The Hubble Space Telescope: 25 years of cosmic discovery", by the representative of the United States;

(c) "The United States National Academy of Sciences and its space policy and programmatic advisory role", by the representative of the United States;

(d) "The role of industry in space: a shifting paradigm", by the representative of the United States;

(e) "Thailand space technology advancement", by the representative of Thailand;

(f) "Lunar Mission One", by the representative of the United Kingdom;

(g) "World Space Week", by the observer for WSWA;[1] and

(h) "SGAC: next generation perspectives from UNISPACE III to now", by the observer for SGAC.

30. The view was expressed that any launching activities by the Democratic People's Republic of Korea using ballistic missile technology and any activities related to its ballistic missile programme were a flagrant violation of international law, including Security Council resolutions 1718 (2006), 1874 (2009), 2087 (2013) and 2094 (2013). The delegation expressing that view also stated that unlawful acts could not create rights. In that regard, the position of the Secretary-General of the United Nations, in his letter to the President of the Security Council dated 22 February 2013,[2] stating that the act of registration was a technical procedure under the Registration Convention and did not confer legality or legitimacy to the launch of 12 December 2012, was underscored. The delegation expressed the view that it was deplorable that the Democratic People's Republic of Korea had abused the registration function of the United Nations under the Registration Convention to attempt to legitimize its ballistic missile-related programme as a peaceful space activity, including by notifying its national point of contact, the National Aerospace Development Administration, which was an alias of the Korean Committee for Space Technology, an entity listed in the sanctions list of the Security Council Committee established pursuant to resolution 1718 (2006).

[1] See also the World Space Week 2014 annual report (A/AC.105/2015/CRP.14).

[2] S/2013/108.

31. The view was expressed that consultations organized thus far by the European Union on its proposed draft for an international code of conduct for outer space activities had been unproductive. The delegation expressing that view was also of the view that the newly proposed negotiations on the draft code would be detrimental to the work of the Working Group on the Long-term Sustainability of Outer Space Activities of the Scientific and Technical Subcommittee. That delegation further considered that normative regulations impacting the wide range of issues relating to the safety of space operations should be handled through established practices within the Committee on the Peaceful Uses of Outer Space and its Subcommittees.

32. The view was expressed that the draft international code of conduct promoted concepts that contradicted basic norms of international law, such as unauthorized supra-jurisdictional actions against foreign space objects based on indefinite motives. The process of consultations on the draft code had not proved to be successful, owing to a corporate style of behaviour on the part of the authors and co-sponsors of the document, who had demonstrated their reluctance to act in a way motivated by partnership and responsible management of the process of consultations and to take observations of invited participants into consideration and illuminate their concerns. The delegation expressing those views also considered that, before advancing a position on the right to self-defence in any international regulatory instrument, it would be important to achieve a shared understanding within the framework of the Committee concerning the legal basis and modalities for exercising such a right, as applied to outer space, and that a separate adoption of the draft international code of conduct, with its emphasis on illicit actions in outer space, would mean reformatting space policy and setting a long-term negative trend in regulating the safety and security of space activities.

33. Some delegations expressed the view that the consultations on the draft international code of conduct for outer space activities were productive and served as a good basis for the next meeting on the draft code of conduct, to be held in New York from 27 to 31 July 2015.

34. Some delegations expressed the view that, in its report, the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities endorsed efforts to pursue political commitments, such as in the form of a multilateral code of conduct, to encourage responsible action and the peaceful use of outer space. The delegations expressing that view were also of the view that those initiatives, within and outside of the Committee, were complementary and aimed at supporting States in better abiding by their international obligations.

35. The view was expressed that, in its report, the Group of Governmental Experts provided for the draft code of conduct as only one possibility for implementing recommendations on transparency and confidence-building measures in outer space activities.

36. The view was expressed that the draft international code of conduct would provide the rules of the road for outer space activities in the form of norms and behaviours, and would constitute a useful tool to help countries in establishing best practices to mitigate space debris and enhance the informal sharing of information to avoid collisions.

37. Some delegations expressed the view that the draft international code of conduct, being prepared in response to General Assembly resolutions 68/50 and 69/38, was a contribution to transparency and confidence-building measures in outer space activities.

38. The view was expressed that an international code of conduct for outer space activities should be developed in an inclusive and transparent manner in order to allow as wide a participation as possible. The delegation expressing that view considered that such an international code of conduct should cover all space activities, civil and military, and should respect the legal personality of all international organizations without distinction. Such a new instrument should also be coherent with and complementary to all pertinent international instruments, existing or in development. Synergies and coordination should be sought with related work carried out within the United Nations and the Committee in order to avoid creating parallel international structures.

F. Adoption of the report of the Committee

39. After considering the various items before it, the Committee, at its 705th meeting, on 20 June 2015, adopted its report to the General Assembly containing the recommendations and decisions set out below.

Chapter II

Recommendations and decisions

A. Ways and means of maintaining outer space for peaceful purposes

40. In accordance with paragraph 14 of General Assembly resolution 69/85, the Committee continued its consideration, as a matter of priority, of ways and means of maintaining outer space for peaceful purposes, including consideration of ways to promote regional and interregional cooperation and the role that space technology could play in the implementation of the recommendations of the United Nations Conference on Sustainable Development.

41. In accordance with paragraph 15 of the same resolution, the Committee considered the broader perspective of space security and associated matters that would be instrumental in ensuring the safe and responsible conduct of space activities, as well as the recommendations contained in the report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities, with a view to identifying those recommendations that could, to the extent practicable, be adapted to and instrumental in ensuring the safety of space operations and the long-term sustainability of outer space activities in general.

42. The representatives of Brazil, Chile, Colombia, Indonesia, Japan, the Republic of Korea, the Russian Federation, Switzerland, the United States and Venezuela (Bolivarian Republic of) made statements under the item. During the general exchange of views, statements relating to the item were also made by other member States.

43. The Committee heard the following presentations under the item:

(a) "The Italian contribution to space exploration", by the representative of Italy;

(b) "Space Security Index", by the representative of Canada.

44. The Committee had before it the following:

(a) Note by the Secretariat entitled "Recommendations of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities: views of States members of the Committee on the Peaceful Uses of Outer Space" (A/AC.105/1080 and Add.1 and 2);

(b) Working paper submitted by the Russian Federation entitled "Achievement of a uniform interpretation of the right of self-defence in conformity with the Charter of the United Nations as applied to outer space as a factor in maintaining outer space as a safe and conflict-free environment and promoting the long-term sustainability of outer space activities" (A/AC.105/L.294).

45. The view was expressed that the Committee should begin to consider the legal basis for and the modalities of, in a hypothetical case, the exercise of the right to self-defence in accordance with the Charter of the United Nations, as applied to outer space; that Articles 2 and 51 of the Charter of the United Nations should be thoroughly analysed and interpreted in relation to outer space activities, with its complex system of maintenance of security and where potential conflicts of interest could lead to the emergence of extreme situations; and that such work, logically associated with the responsible conduct of space activities, would help States to reach an understanding and partnership with regard to establishing and sustaining a highly adaptive regulatory system that would adequately alleviate or avoid situations and problems that might cause conflicts in outer space.

46. The view was expressed that consideration by the Committee of the well-defined questions contained in document A/AC.105/L.294 would assist in better understanding the actions to be taken in reaction to conflict situations (or conflicts of interests) in outer space, which would be important in view of the tendency of space regulation operations — as seen in the national documents of some States — to respond to such conflicts with immediate actions, rather than through consultation mechanisms. The concept of pre-emptive defence in outer space, as defined in some national strategies, was not supported by the provisions of the Charter of the United Nations. The delegation expressing that view was also of the view that a common understanding and position on matters relating to the right of self-defence in outer space, if achieved in the Committee, could be presented to the General Assembly and Security Council.

47. Some delegations reaffirmed the commitment of their countries to the peaceful use and exploration of outer space and emphasized the following principles: universal and equal access to outer space for all countries without discrimination, regardless of their level of scientific, technical and economic development, as well as the equitable and rational use of outer space for the benefit of all humankind; non-appropriation of outer space, including the Moon and other celestial bodies, by claim of sovereignty, use, occupation or any other means; non-militarization of outer space, which should never be used for the installation of weapons of any kind, and, as a common heritage of humankind, its strict use for the improvement of

living conditions and peace among the peoples inhabiting our planet; international responsibility of States for their national space activities; and regional cooperation to promote space activities, as established by the General Assembly and other international forums.

48. Some delegations expressed the view that it was necessary to ensure the safe and responsible conduct of space activities and to identify effective tools that could provide the Committee with new guidance, in a pragmatic manner and without prejudice to the mandates of other intergovernmental forums, through the development and implementation of transparency and confidence-building measures.

49. The view was expressed that the increase in the number of objects in Earth orbit, the diversification of assets and actors in space, the development of new capabilities and the increasing risk of collisions with space debris, including risks arising from a possible use of force in space, posed new challenges to the peaceful uses of outer space.

50. Some delegations expressed the view that the existing legal regime with respect to outer space was not sufficient to prevent the placement of weapons in outer space or to address issues concerning the space environment, and that it was important to further develop international space law in order to maintain outer space for peaceful purposes. Those delegations were of the view that, in order to ensure that outer space was used peacefully and to prevent its militarization, the preparation of binding international legal instruments was necessary.

51. Some delegations expressed the view that, in order to maintain the peaceful nature of space activities and prevent the placement of weapons in outer space, it was essential for the Committee to enhance its cooperation and coordination with other bodies and mechanisms of the United Nations system, such as the First Committee of the General Assembly and the Conference on Disarmament.

52. Some delegations expressed the view that, in order to maintain the peaceful nature of space activities and prevent the placement of weapons in outer space, it was essential for the Committee to enhance its cooperation and coordination with other bodies and mechanisms of the United Nations system, such as the First Committee of the General Assembly and the Conference on Disarmament. Those delegations were also of the view that the Committee had a duty to suggest, recommend and generate synergies with those bodies, with a view to formulating an approach to ways and means of maintaining outer space for peaceful purposes.

53. The view was expressed that the Committee had been created exclusively to promote international cooperation with respect to the peaceful uses of outer space and that disarmament issues were more appropriately dealt with in other forums, such as the First Committee and the Conference on Disarmament. The delegation expressing that view was also of the view that no actions by the Committee were needed regarding the weaponization of outer space and that there was no scarcity of appropriate multilateral mechanisms under which disarmament could be discussed.

54. The Committee noted with satisfaction the adoption by the General Assembly of its resolution 68/50 on 5 December 2013 and took note of the report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities (see A/68/189) and the note by the Secretariat containing

views of States members of the Committee on the recommendations of the Group of Governmental Experts (A/AC.105/1080 and Add.1 and 2).

55. The view was expressed that the achievement by the 2014 ITU Plenipotentiary Conference of consensus on a resolution on strengthening the role of ITU with regard to transparency and confidence-building measures in outer space activities was a result of the successful implementation of the recommendations of the Group of Governmental Experts.

56. The view was expressed that the Committee could have a role in reviewing the implementation of specific unilateral, bilateral, regional and multilateral transparency and confidence-building measures in outer space, as well as in discussing new ones.

57. The Committee noted with satisfaction continuous developments in a number of cooperative endeavours that were being pursued at the international, regional and interregional levels by various actors, such as States and international intergovernmental and non-governmental organizations, and emphasized that such cooperation was essential for strengthening the peaceful uses of outer space and for assisting States in the development of their space capabilities. In that regard, the Committee noted the important role that bilateral and multilateral agreements played in promoting common space exploration objectives and cooperative and complementary space exploration missions.

58. Some delegations expressed the view that the United Nations was essential for strengthening and developing cooperation and collaboration among countries, in particular on scientific and space technology, and for maximizing space resources for common prosperity, security and the long-term sustainability of outer space activities. The delegations expressing that view were also of the view that solid cooperation should enhance information-sharing and technical cooperation among countries in line with the principles of friendship, equal partnership and mutual respect.

59. The Committee noted with appreciation that the sixth African Leadership Conference on Space Science and Technology for Sustainable Development would be hosted by Egypt and would be held in Sharm el-Sheikh, Egypt, in December 2015.

60. The Committee recalled the Pachuca Declaration, adopted by the Sixth Space Conference of the Americas, held in Pachuca, Mexico, from 15 to 19 November 2010, which had developed a regional space cooperation mechanism for the near future and also, inter alia, created an advisory group of space experts. The Committee noted that the pro tempore secretariat of the Sixth Space Conference of the Americas was continuing the implementation of the Pachuca Declaration. The Committee also noted that the Seventh Space Conference of the Americas would be hosted by the Government of Nicaragua and that the Government of the Bolivarian Republic of Venezuela had expressed its willingness to host the Eighth Space Conference of the Americas.

61. The Committee noted with satisfaction that the twenty-first session of the Asia-Pacific Regional Space Agency Forum had been successfully held from 2 to 5 December 2014 in Tokyo under the theme "Leap to the next stage: delivering innovative ideas and solutions". The Committee also noted that the

twenty-second session would be held in Kuta, Indonesia, from 1 to 4 December 2015, under the theme "Sharing solutions through synergy in space".

62. The Committee noted with satisfaction that the eighth meeting of the Council of APSCO had been held in Lahore, Pakistan, on 24 and 25 September 2014, at which the Council had approved a number of new projects, reviewed the progress being made on those approved earlier and agreed to hold its next meeting in 2015.

63. Some delegations expressed the view that the Committee played a notable role in advancing space cooperation and provided a unique forum for the exchange of information among States, and that there were tangible opportunities to enhance international cooperation, in keeping with the Committee's mandate.

64. The Committee agreed that, through its work in the scientific, technical and legal fields, as well as through the promotion of international dialogue and exchange of information on various topics relating to the exploration and use of outer space, it had a fundamental role to play in enhancing transparency and confidence-building among States, as well as in ensuring that outer space was maintained for peaceful purposes.

65. The Committee recommended that at its fifty-ninth session, in 2016, consideration of the item on ways and means of maintaining outer space for peaceful purposes should be continued, on a priority basis.

B. Report of the Scientific and Technical Subcommittee on its fifty-second session

66. The Committee took note with appreciation of the report of the Scientific and Technical Subcommittee on its fifty-second session (A/AC.105/1088), which contained the results of its deliberations on the items considered by the Subcommittee in accordance with General Assembly resolution 69/85.

67. The Committee expressed its appreciation to Előd Both (Hungary) for his able leadership during the fifty-second session of the Subcommittee.

68. The representatives of Algeria, Austria, Canada, Chile, China, the Czech Republic, Egypt, Germany, India, Iran (Islamic Republic of), Japan, Mexico, Pakistan, the Republic of Korea, the Russian Federation, Saudi Arabia, the Syrian Arab Republic, Turkey, Venezuela (Bolivarian Republic of) and the United States made statements under the item. Statements were also made by the representative of Chile on behalf of the Group of Latin American and Caribbean States and on behalf of the Group of 77 and China. During the general exchange of views, statements relating to the item were also made by other member States.

69. The Committee heard the following presentations:

(a) "Japan's human space activity, a 30-year history", by the representative of Japan;

(b) "Operation and development of the BeiDou Navigation Satellite System", by the representative of China;

(c) "The Italian scientific contribution to the BepiColombo mission", by the representative of Italy;

(d) "A preliminary suggestion for international cooperation on the Chang'e-4 lunar probe", by the representative of China.

1. United Nations Programme on Space Applications

(a) Activities of the United Nations Programme on Space Applications

70. The Committee took note of the discussion of the Subcommittee under the item on the United Nations Programme on Space Applications, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 31-52).

71. The Committee noted that the priority areas of the Programme were environmental monitoring, natural resource management, satellite communications for tele-education and telemedicine applications, disaster risk reduction, the use of global navigation satellite systems (GNSS), the Basic Space Science Initiative, space law, climate change, the Basic Space Technology Initiative and the Human Space Technology Initiative. The Committee also noted that the new thematic priority of monitoring and protecting biodiversity and ecosystems was included in the Programme for 2015.

72. The Committee took note of the activities of the Programme carried out in 2014, as presented in the report of the Subcommittee (A/AC.105/1088, paras. 41-44) and in the report of the Expert on Space Applications (A/AC.105/1085, annex I).

73. The Committee expressed its appreciation to the Office for Outer Space Affairs for the manner in which the activities of the Programme had been implemented. The Committee also expressed its appreciation to the Governments and intergovernmental and non-governmental organizations that had sponsored the activities.

74. The Committee noted with satisfaction that progress was being made in the implementation of the activities of the Programme for 2015.

75. The Committee also noted with satisfaction that the Office for Outer Space Affairs was helping developing countries and countries with economies in transition to participate in and benefit from activities being carried out under the Programme.

76. The Committee noted with concern the limited financial resources available to implement the Programme and appealed to States and organizations to continue supporting the Programme through voluntary contributions.

77. The Committee noted that additional human resources were necessary to fully implement the range of activities to be conducted by the Programme and that without those additional resources, the Office would not be in a position to meet the increasing demands by Member States with respect to the sustainable development goals and the post-2015 development agenda.

78. The Committee took note of the conference room papers entitled "Space technologies for monitoring and protecting biodiversity and ecosystems: a proposed new thematic priority for the United Nations Programme on Space Applications" (A/AC.105/2015/CRP.10); "Basic Space Technology Initiative: activities in 2014-2015 and plans for 2016 and beyond" (A/AC.105/2015/CRP.11); and "Report on the United Nations/Japan Workshop on Space Weather: 'Science and

data products for International Space Weather Initiative instruments'" (A/AC.105/2015/CRP.12).

(i) Conferences, training courses and workshops of the United Nations Programme on Space Applications

79. The Committee endorsed the programme of workshops, training courses, symposiums and expert meetings to be held in 2016 for the benefit of developing countries and relating to environmental monitoring, natural resource management, global health, GNSS, basic space science, basic space technology, climate change, human space technology and the socioeconomic benefits of space activities.

80. Some delegations called upon the Office for Outer Space Affairs to conduct, under the United Nations Programme on Space Applications, workshops in Latin America and the Caribbean in 2016.

(ii) Long-term fellowships for in-depth training

81. The Committee expressed its appreciation to the Government of Italy, which, through the Politecnico di Torino and the Istituto Superiore Mario Boella and with the collaboration of the National Institute of Meteorological Research, had continued to provide fellowships for postgraduate studies on GNSS and related applications.

82. The Committee expressed its appreciation to the Government of Japan for continuing the United Nations/Japan Long-term Fellowship Programme on Nanosatellite Technologies, in cooperation with the Kyushu Institute of Technology.

83. The Committee expressed its appreciation to the Government of Germany, which, in collaboration with the Centre of Applied Space Technology and Microgravity and the German Aerospace Centre (DLR), had successfully conducted the first cycle of its drop tower experiments.

84. The Committee welcomed the cooperation programme between the Office for Outer Space Affairs and the Japan Aerospace Exploration Agency (JAXA) on offering entities located in States Members of the United Nations an opportunity to deploy a small satellite of their design and construction from the Japanese Experiment Module (Kibo) of the International Space Station, in order to promote international cooperation and capacity-building in space technology and its applications under the United Nations Programme on Space Applications. The undertaking of similar joint projects by the Office and other space agencies was encouraged.

85. The Committee noted that it was important to increase opportunities for capacity-building and in-depth education in all areas of space science, technology, applications and law through cooperative projects and long-term fellowship programmes, including by the Office, and urged Member States to make such opportunities available at their relevant institutions.

(iii) Technical advisory services

86. The Committee noted with appreciation the technical advisory services provided under the United Nations Programme on Space Applications in support of activities and projects promoting regional cooperation in space applications, as

referred to in the report of the Expert on Space Applications (A/AC.105/1085, paras. 39-48).

(iv) Regional centres for space science and technology education, affiliated to the United Nations

87. The Committee noted with satisfaction that the United Nations Programme on Space Applications continued to emphasize, promote and foster cooperation with Member States at the regional and global levels to support the regional centres for space science and technology education, affiliated to the United Nations. The highlights of the activities of the regional centres supported under the Programme in 2013-2015 were presented in the report of the Expert on Space Applications (A/AC.105/1085, annex III).

88. The Committee noted with appreciation that the host countries of the regional centres, in line with their obligations as host countries, were continuing to provide the centres with financial and in-kind support.

89. The Committee noted with concern the limited financial resources available to some of the regional centres and appealed to Member States and organizations in the regions where those centres were located to support the activities of the centres through financial and in-kind contributions.

90. The Committee welcomed the inauguration of the new Regional Centre for Space Science and Technology Education for Asia and the Pacific, located at Beihang University in Beijing, and noted with appreciation the commitment of the Government of China to supporting the work of the centre.

91. The Committee noted that the Regional Centre had completed the selection of 42 overseas students for the first long-term scholarship programme and that those students would start their studies in September 2015. In April 2015, the regional centre had organized a short-term training programme on satellite navigation and its applications. Two other short-term training programmes, on remote sensing and on space law and policy, were to be held in the second half of 2015.

(b) International Satellite System for Search and Rescue

92. The Committee noted with satisfaction that the International Satellite System for Search and Rescue (COSPAS-SARSAT) currently had 41 member States and two participating organizations, and that there was additional interest in being associated with the programme. The Committee noted with appreciation that the worldwide coverage for emergency beacons had been made possible by the space segment, which consisted of six polar-orbiting and six geostationary satellites provided by Canada, France, India, the Russian Federation and the United States, along with the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), as well as by the ground-segment contributions made by 26 other countries. The Committee noted that, since becoming operational in 1982, COSPAS-SARSAT had provided assistance in rescuing nearly 40,000 persons in more than 11,000 search and rescue events and that in 2014, alert data from the system had helped to save more than 2,100 lives in over 700 search and rescue events worldwide.

93. The Committee noted that the use of satellites in medium-Earth orbit continued to be explored, with a view to improving international satellite-aided search and rescue operations.

2. Space technology for socioeconomic development in the context of the United Nations Conference on Sustainable Development and the post-2015 development agenda

94. The Committee took note of the discussion of the Subcommittee under the item on space technology for socioeconomic development in the context of the United Nations Conference on Sustainable Development and the post-2015 development agenda, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 53-69).

95. The Committee endorsed the recommendations and decisions on the item made by the Subcommittee and its Working Group of the Whole (A/AC.105/1088, para. 69, and annex I, paras. 4 and 7).

96. The Committee recalled that the General Assembly, in its resolution 69/85, had reiterated the need to promote the benefits of space technology and its applications in the major United Nations conferences and summits for economic, social and cultural development and related fields, and had recognized that the fundamental significance of space science and technology and their applications for global, regional, national and local sustainable development processes should be promoted in the formulation of policies and programmes of action and their implementation, including through efforts to achieve the objectives of those conferences and summits, and including implementing the United Nations Millennium Declaration and contributing to the post-2015 development agenda process.

97. The Committee endorsed the mandate and workplan of the expert group on space and global health (A/AC.105/1088, annex I, para. 7).

3. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment

98. The Committee noted the discussion of the Subcommittee under the item on matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 70-84).

99. The Committee also noted a number of regional and international initiatives aimed at strengthening the use of remote-sensing data to further socioeconomic and sustainable development, in particular for the benefit of developing countries.

100. In the course of the discussion, delegations reviewed national and cooperative programmes on using remote-sensing data. A number of areas where remote-sensing data continued to be crucial for well-informed decision-making were singled out. Examples included climate change monitoring, disaster management, management of natural resources, illicit-crop monitoring, drought and desertification forecasting, oceanography, rural development, agriculture, urban planning, food security, public health and humanitarian and development aid, in particular monitoring populations and natural resources in camps for refugees and internally displaced persons.

101. In view of the increasing importance of remote sensing technology and other space science and technology applications, some delegations called for increased capacity-building in those areas to enable relevant national actors, in particular in developing countries, to use remote sensing technology when taking preventive measures against environmental degradation and related hazards. Those delegations also expressed their support for initiatives that promoted the availability and distribution of space-based data to developing countries at no cost.

102. The Committee noted the important role played by regional organizations and coordination mechanisms, such as APSCO and the Asia-Pacific Regional Space Agency Forum (APRSAF), with its Sentinel Asia project, in promoting regional cooperation in the use of remote sensing technology. It also noted the initiatives undertaken by ESCAP on drought monitoring and disaster management.

103. The Committee also noted the number of launches of Earth observation satellites and a number of cooperative initiatives by developing countries to launch such satellites, and stressed the need to continue enhancing the capacities of developing countries with regard to the use of remote sensing technology.

4. Space debris

104. The Committee took note of the discussion of the Subcommittee under the item on space debris, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 85-113).

105. The Committee endorsed the decisions and recommendations of the Subcommittee on the item (A/AC.105/1088, paras. 90 and 113).

106. The Committee noted with appreciation that some States were already implementing space debris mitigation measures, consistent with the Space Debris Mitigation Guidelines of the Committee and/or the Inter-Agency Space Debris Coordination Committee (IADC) Space Debris Mitigation Guidelines, and that other States had developed their own space debris mitigation standards based on those guidelines. The Committee also noted that other States were using the IADC Guidelines and the European Code of Conduct for Space Debris Mitigation as reference points in their regulatory frameworks for national space activities. The Committee further noted that other States had cooperated, in the framework of the ESA space situational awareness programme, to address the issue of space debris.

107. The Committee urged those countries that had not yet done so to consider voluntary implementation of the Space Debris Mitigation Guidelines of the Committee and/or the IADC Space Debris Mitigation Guidelines.

108. The Committee noted with appreciation the establishment of a space debris observation and operation centre by the China National Space Administration on 8 June 2015, and the China-Brazil Joint Laboratory for Space Weather on 6 August 2014, both of which would contribute to international cooperation in space debris and space weather.

109. Some delegations expressed the view that the future of space activities largely depended on space debris mitigation and removal, and that the issue of mitigation of space debris should continue to be treated as a priority, with a view to further increasing research in the areas of technology for space debris observation, space

debris environmental modelling and technologies to protect space systems from space debris and to limit the creation of additional space debris.

110. Some delegations expressed the view that it was necessary to continue the thorough consideration of the issue of space debris mitigation, in particular by paying greater attention to the problem of debris coming from platforms with nuclear power sources in outer space and to collisions of space objects with space debris and their derivatives, as well as to ways of improving the technology for monitoring space debris.

111. Some delegations expressed the view that States, especially those that were largely responsible for the situation with regard to space debris and those that had the ability to take action for space debris mitigation, should disseminate information on action taken to reduce the generation of more space debris.

112. The view was expressed that the Space Debris Mitigation Guidelines of the Committee had proved to be an important mechanism for international cooperation to address major opportunities and challenges in the peaceful use and exploration of outer space.

113. The view was expressed that the investigation and consideration of new measures to manage space debris in the long term were indispensable to ensuring the long-term sustainability of outer space activities.

114. The view was expressed that it was important to address the proliferation of space debris without hampering the development of the capabilities of emerging spacefaring nations.

115. The view was expressed that the issue of active space debris removal could become a new item on the agenda of the Subcommittee.

116. The view was expressed that space debris mitigation measures were possible even for small and very small satellites.

117. The view was expressed that, given the significant risks associated with the proliferation of space debris threatening the integrity of satellites, the International Space Station and the men and women on board the International Space Station, the issue of space debris mitigation should continue to receive the attention of the Committee.

118. The view was expressed that spacefaring countries should assist countries with emerging space programmes in building capacity for implementing space debris mitigation measures, including by providing training and transfer of relevant technology, and without imposing undue costs on the space programmes of developing nations.

5. Space-system-based disaster management support

119. The Committee took note of the discussion of the Subcommittee under the item on space-system-based disaster management support, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 114-132).

120. The Committee had before it a proposed workplan for the biennium 2016-2017 of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER), contained in

document A/AC.105/1093. The Committee also had before it conference room papers entitled "United Nations/Germany International Conference on Earth Observation: global solutions for the challenges of sustainable development in societies at risk" (A/AC.105/2015/CRP.9) and "Space-based information and the Sendai Framework for Disaster Risk Reduction" (A/AC.105/2015/CRP.16).

121. At the 690th meeting of the Committee, the Director of the Office for Outer Space Affairs, in her statement to the Committee, thanked the Governments of Austria, China and Germany for their commitment to the UN-SPIDER programme and the support they had given it since its inception. She invited interested Member States to consider providing necessary resources as voluntary contributions and/or as concrete offers for collaboration and partnership, in order to enable the UN-SPIDER programme to respond to the growing demand for support in disaster risk reduction and emergency response. The Director also underlined the significant role of the UN-SPIDER knowledge portal (www.un-spider.org) in assisting Member States in emergency situations, including during the recent earthquakes in Bangladesh, China, India and Nepal.

122. The Committee noted that natural disasters continued to be a matter of great concern to all countries and that increased efforts should therefore be vested in strengthening the use of space-based technology for disaster risk reduction.

123. The Committee welcomed the adoption in March 2015 of the Sendai Framework for Disaster Risk Reduction 2015-2030, in which the value of space-based technology and Earth observation for disaster management and emergency response was recognized, because they paved the way for building more resilient societies through effective disaster risk management. The Committee noted that the efforts conducted by the Office for Outer Space Affairs and its UN-SPIDER programme, as detailed in A/AC.105/2015/CRP.16, had resulted in the final text of the Sendai Framework making specific references to the importance of using information gathered by space-based platforms and in situ to understand the risks connected with disasters of natural causes worldwide. The efforts of the Office and its UN-SPIDER programme had included the promotion of international cooperation as a way to enhance the use of space-based technologies and related services at the national and local levels.

124. The Committee noted that, during the Third World Conference on Disaster Risk Reduction, held in Sendai, Japan, from 14 to 18 March 2015, the Global Earth Observation Partnership was launched as a voluntary effort by the Office for Outer Space Affairs, its UN-SPIDER programme and 17 other partners to facilitate the use of Earth observation and space-based technologies to contribute to the achievement of the main goal and the seven targets stipulated in the Sendai Framework.

125. The Committee noted with satisfaction that a joint United Nations/Germany international conference on Earth observation had been held in Bonn, Germany, from 26 to 28 May 2015 to discuss global solutions for the challenges of sustainable development in societies at risk. It had been co-organized with DLR and the German Federal Ministry for Economic Affairs and Energy to discuss ways and means of institutionalizing the use of space-based information in national plans and regional and global platforms, and to review international space cooperation mechanisms aimed at fostering national implementation of the Sendai Framework.

126. The Committee noted with satisfaction that the fifth annual conference organized by the UN-SPIDER Beijing office would be held from 14 to 16 September 2015 in Beijing, focusing on the implementation of the Sendai Framework.

127. The Committee noted with appreciation the information and services provided by the UN-SPIDER programme, such as the technical advisory missions, as a valuable contribution to strengthening disaster risk preparedness and emergency response at the national level.

128. Some delegations called on the Office for Outer Space Affairs and its UN-SPIDER programme to intensify their capacity-building activities through training programmes, in particular in developing countries.

129. The Committee noted the valuable contribution that Member States were making with their ongoing activities to increase the availability and use of space-based solutions in support of disaster management, including the Sentinel Asia project and its coordination of emergency observation requests through the Asian Disaster Reduction Centre, the emergency mapping service of the European Earth Observation Programme (Copernicus) and the Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters (also called the International Charter on Space and Major Disasters). The Committee noted the need to strengthen disaster risk reduction efforts by using services of the UN-SPIDER programme and other disaster relief platforms to enable more countries to benefit from disaster risk reduction efforts.

130. The Committee also noted the valuable contribution that the Global Earth Observation Partnership could make in the coming years as a vehicle for enhancing the use by developing countries of space-based and in situ information to reduce both their exposure to hazards and their vulnerability.

131. The Committee noted the capacity-building efforts made by regional centres affiliated to the United Nations, in particular the Regional Centre for Space Science and Technology Education for Asia and the Pacific, by conducting courses on disaster risk reduction and emergency response.

132. The view was expressed that space-based data could be beneficial in many more disaster situations, not only sudden-onset disasters but also slow-onset disasters, and that more support was needed to make space-based data widely available for monitoring unusual situations such as events related to terrorism.

6. Recent developments in global navigation satellite systems

133. The Committee took note of the discussion of the Subcommittee under the item on recent developments in GNSS, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 133-155).

134. The Committee noted that 2015 marked the tenth anniversary of the establishment of ICG under the auspices of the United Nations. It was highlighted that ICG had been highly successful in bringing together the providers and users of GNSS to promote its use and integration into national infrastructure, particularly in developing countries.

135. The Committee expressed its appreciation to the Office for Outer Space Affairs for its continued support as executive secretariat for ICG and its Providers' Forum and for the organization of workshops and training courses focusing on capacity-building in the use of GNSS-related technologies in various fields of science and industry, including on the subject of space weather effects in the ionosphere and their impact on positioning.

136. The Committee noted with appreciation that the ninth meeting of ICG and the thirteenth meeting of its Providers' Forum, organized by the European Commission and the European GNSS Agency on behalf of the European Union, had been held in Prague from 10 to 14 November 2014. The Committee noted that the tenth meeting of ICG would be hosted by the United States in Boulder, Colorado, from 1 to 6 November 2015. The Committee also noted the expression of interest by the Russian Federation in hosting the eleventh meeting of ICG in 2016.

137. The Committee noted with appreciation the financial contributions made by the United States and the European Commission to the Office for Outer Space Affairs in support of GNSS-related activities, ICG and the ICG Providers' Forum.

138. The Committee noted that regular meetings among China, India, Japan, the Russian Federation, the United States and the European Union had been held to discuss ways in which interoperability among GNSS providers could be enhanced and services for the global user community could be improved.

7. Space weather

139. The Committee took note of the discussion of the Subcommittee under the item on space weather, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 156-169).

140. The Committee welcomed the establishment of the Expert Group on Space Weather of the Subcommittee, which had met for the first time on the margins of the fifty-second session of the Subcommittee under the leadership of Canada to define its programme of work, drawing on the best practices of the work of expert group C on space weather of the Working Group on the Long-term Sustainability of Outer Space Activities.

141. The Committee endorsed the mandate of the Expert Group, as contained in paragraph 169 of the report of the Subcommittee (A/AC.105/1088), which was to promote awareness, provide guidance and enable communication and cooperation in space weather-related activities among States members of the Committee and related national and international organizations.

142. The Committee noted that the work of the Expert Group could contribute to the Inter-programme Coordination Team on Space Weather, coordinated by the World Meteorological Organization, and to the creation of the space weather road map, initiated by the Committee on Space Research (COSPAR).

143. The Committee also noted that a number of national space weather strategies were being developed, such as the national space weather strategy of the United States, which aimed at enhancing national preparedness for severe space weather events and attached great importance to promoting the international coordination of the exchange of data and services related to space weather.

144. The Committee further noted that a number of events were being held that were aimed at identifying areas of cooperation among member States and national and international organizations to improve national capabilities and enhance global efforts related to space weather, including the United Nations/Japan Workshop on Space Weather held in Fukuoka, Japan, from 2 to 6 March 2015; the workshop entitled "Space weather services to build global resilience", led by the National Oceanic and Atmospheric Administration of the United States, held on the margins of the fifty-second session of the Scientific and Technical Subcommittee; and the planned half-day symposium of the COSPAR/International Living with a Star programme, to be held during the fifty-third session of the Scientific and Technical Subcommittee, in 2016.

145. The Committee noted that the International Centre for Space Weather Science and Education (ICSWSE), based at Kyushu University, Japan, continued its support for space weather research, including the operation of a Magnetic Data Acquisition System (MAGDAS) global network of magnetometers, and space weather education, including the establishment of schools for building capacity in connection with MAGDAS. It also noted that the newsletter of the International Space Weather Initiative continued to be published by ICSWSE.

8. Near-Earth objects

146. The Committee took note of the discussion of the Subcommittee under the item on near-Earth objects, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 170-191).

147. The Committee recalled that effective responses for the mitigation of hazard threats from near-Earth objects were best addressed through international cooperation in observation, characterization, information-sharing and capacity-building, and in the advancement of technologies for the collection of data on near-Earth objects and the development of near-Earth object observation spacecraft.

148. The Committee noted with satisfaction the ongoing work by the International Asteroid Warning Network (IAWN) and of the Space Mission Planning Advisory Group (SMPAG), established as a result of the recommendations for an international response to the near-Earth object impact threat, recalled by the General Assembly in its resolution 69/85.

149. The Committee noted that the steering committee of IAWN had held a meeting on 11 November 2014 in conjunction with the forty-sixth annual meeting of the Division for Planetary Sciences of the American Astronomical Society. The steering committee heard presentations about the current capabilities and activities of multiple near-Earth object characterization projects. A final draft of the letter of intent for participation in IAWN was presented and discussed. Further information can be found at www.minorplanetcenter.net/IAWN.

150. The Committee noted that the third meeting of SMPAG had taken place at the European Space Research Institute of ESA in Frascati, Italy, on 9 and 10 April 2015. The main focus had been the discussion of the SMPAG workplan. All task leaders had presented the status of their work items and it had been agreed that semi-annual reports on ongoing tasks would be provided by the task leaders.

151. The Committee was informed that the next SMPAG steering committee meeting was to be held on the margins of the meeting of the Division for Planetary Sciences of the American Astronomical Society in National Harbor, Maryland, United States, from 8 to 13 November 2015. Task leaders had been invited to participate and further information could be found on the official SMPAG website.

152. The view was expressed that the technical work of IAWN and SMPAG would have to be complemented by high-level political decision-making mechanisms so that measures to counter an emerging threat could be implemented in a timely and effective manner.

153. The Committee noted that the Action Team on Near-Earth Objects had successfully established IAWN and SMPAG and that the Subcommittee had recommended that it be dissolved.

154. The Committee noted with appreciation the work of the Action Team and commended its achievements in coordinating international efforts to mitigate the hazard threat from near-Earth objects, in particular by establishing IAWN and SMPAG. The Committee also thanked the Chair of the Action Team, Sergio Camacho (Mexico), for his dedicated work.

9. Use of nuclear power sources in outer space

155. The Committee took note of the discussion of the Subcommittee under the item on the use of nuclear power sources in outer space, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 192-208).

156. The Committee endorsed the report of the Subcommittee and the Working Group on the Use of Nuclear Power Sources in Outer Space, reconvened under the chairmanship of Sam A. Harbison (United Kingdom) (A/AC.105/1088, para. 208, and annex II).

157. The Committee encouraged States and international intergovernmental organizations to begin or to continue implementing the Safety Framework for Nuclear Power Source Applications in Outer Space (A/AC.105/934).

158. Some delegations expressed the view that the Safety Framework, in its present form, was not adequate for meeting the challenges posed by the use of nuclear power sources in outer space and that their proliferation, including in terrestrial orbits, should not be allowed, as their effects on humankind and the environment had not been assessed and there was no definite framework establishing responsibilities and introducing technical and legal tools that could effectively address the critical situations that might arise because of improper practices.

159. Some delegations expressed the view that Governments bore international responsibility for national activities conducted by governmental and non-governmental organizations involving the use of nuclear power sources in outer space, and that the matter concerned all humanity.

160. Some delegations expressed the view that there should be greater coordination and interaction between the Scientific and Technical Subcommittee and the Legal Subcommittee in order to develop binding legal instruments to define the responsibilities of States in the use of nuclear power sources in outer space and to

undertake research on ways and means of optimizing or substituting for the use of nuclear energy in outer space activities.

161. Some delegations expressed the view that more consideration should be given to the use of nuclear power sources in terrestrial orbits in order to address the problem of potential collisions of nuclear power source objects, as well as to their accidental re-entry into the Earth's atmosphere. Those delegations were of the view that more attention should be given to the matter through adequate strategies, long-term planning, regulations and the promotion of binding standards, as well as the Safety Framework for Nuclear Power Source Applications in Outer Space.

10. Long-term sustainability of outer space activities

162. The Committee took note of the discussion of the Subcommittee under the item on the long-term sustainability of outer space activities, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 209-259).

163. The Committee endorsed the recommendations and decisions on the item made by the Subcommittee and the Working Group on the Long-term Sustainability of Outer Space Activities, reconvened under the chairmanship of Peter Martinez (South Africa) (A/AC.105/1088, para. 259, and annex III, paras. 14 and 15).

164. The Committee noted that during the fifty-second session of the Scientific and Technical Subcommittee the Working Group had not affirmed that it could fully proceed with its workplan (A/AC.105/1088, annex III, para. 6) and that no revision of the workplan had been discussed.

165. The Committee noted that during the session, owing to the large amount of substantive work on the updated set of draft guidelines (A/AC.105/L.298), the Working Group again had not affirmed its workplan and the workplan had not been discussed.

166. The Committee requested the Scientific and Technical Subcommittee to consider this matter during its fifty-third session, in February 2016, and to report back to the Committee at its fifty-ninth session, in June 2016.

167. The Committee had before it the following:

(a) Note by the Secretariat on an updated set of draft guidelines for the long-term sustainability of outer space activities (A/AC.105/L.298);

(b) Draft report of the Working Group on the Long-term Sustainability of Outer Space Activities: working paper by the Chair of the Working Group (A/AC.105/C.1/L.343), which had previously been made available to the Subcommittee at its fifty-second session;

(c) Working paper submitted by the Russian Federation entitled "Proposal on the review and consideration of the concept of a United Nations information platform serving common needs in collecting and sharing information on near-Earth space monitoring in the interests of the safety of space operations, and its architectural and programmatic aspects" (A/AC.105/L.293), which had previously been made available to the Subcommittee at its fifty-second session;

(d) Working paper submitted by the Russian Federation entitled "Achievement of a uniform interpretation of the right of self-defence in conformity

with the Charter of the United Nations as applied to outer space as a factor in maintaining outer space as a safe and conflict-free environment and promoting the long-term sustainability of outer space activities" (A/AC.105/L.294), which had previously been made available to the Subcommittee at its fifty-second session;

(e) Working paper submitted by the Russian Federation entitled "Considerations regarding the modalities for consolidating the understanding on issues of enhancing the practice in the registration of space objects in view of the need to ensure the safety of space operations" (A/AC.105/L.295), which had previously been made available to the Subcommittee at its fifty-second session;

(f) Working paper submitted by the Russian Federation entitled "Additional considerations and proposals for building up understanding of the priority aspects, comprehensive meaning and functions of the concept and practices of ensuring the long-term sustainability of outer space activities" (A/AC.105/L.296), which had previously been made available to the Subcommittee at its fifty-second session;

(g) Conference room paper submitted by the Russian Federation entitled "Time for the international community to decide whether it would support an effective set of solutions regarding the enhancement of the safety of space operations or wind up its work on this topic with inconclusive results devoid of any functional load and having marginal practical usefulness" (A/AC.105/2015/CRP.15);

(h) Conference room paper submitted by the United States entitled "Proposal by the United States for an expert group on collaborative space situational awareness" (A/AC.105/2015/CRP.17);

(i) Conference room paper submitted by the United States entitled "Views of the United States on draft guidelines for the long-term sustainability of outer space activities" (A/AC.105/2015/CRP.18);

(j) Conference room paper submitted by the Russian Federation entitled "Russian assessment of the initiative and actions of the European Union to advance its draft code of conduct in space" (A/AC.105/2015/CRP.19);

(k) Conference room paper submitted by the delegations of Brazil, China, India, the Russian Federation and South Africa (the BRICS States) entitled "Joint Statement of the delegations of the BRICS States at the fifty-eighth session of the Committee on the Peaceful Uses of Outer Space on issues pertaining to the elaboration of the guidelines on long-term sustainability of outer space activities" (A/AC.105/2015/CRP.20).

168. The Committee noted that the Working Group had met during the current session of the Committee, using available interpretation services, and that the Chair of the Working Group had held informal consultations with interested delegations during the current session. During those consultations, discussions had been held on certain parts of the updated set of draft guidelines.

169. The Committee noted that during those informal consultations, progress had been made on certain parts of the updated set of draft guidelines, which would be reflected in a new document, to be prepared by the Chair of the Working Group.

170. The Committee underscored the importance of the work of the Working Group and the progress it had made, and commended the Chair for his tireless efforts.

171. The Committee noted with appreciation that the updated set of draft guidelines had been based on the reports of the four expert groups and included additional guidelines and amendments introduced by member States. The Committee noted that the update provided a good basis for further discussion and for the drafting of the guidelines.

172. The Committee noted that the Working Group had agreed to work intersessionally, with the Chair continuing to work with delegations and with the informal translation and terminology reference group to further develop the set of draft guidelines. The Committee also noted that the Chair of the Working Group would explore the idea of holding a further informal working meeting in Vienna during the intersessional period, as this could be an effective mechanism to advance the work.

173. The Committee noted that several recommendations contained in the report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities (see A/68/189) related directly to the work of the Working Group, which additionally highlighted the importance of timely completion of the guidelines.

174. The Committee also noted that the guidelines, once finalized, would contribute to the enhancement of transparency, to confidence-building and to the safety and sustainability of outer space activities, and would form part of a broader framework aimed at fostering the sustainable use of outer space.

175. Some delegations expressed the view that, although the updated set of guidelines provided a sound basis for their finalization, their overall coherence and consistency still needed further improvement. Suggestions included restructuring them into four chapters to improve clarity and overall balance; formulating their provisions consistently; clarifying their interrelationship with the existing legal framework; further consolidating, streamlining and shortening them; and ensuring that they contained action-oriented language.

176. Some delegations expressed the view that the Subcommittee should be able to complete the assigned task of developing the set of guidelines, as the guidelines would, in the long term, prove to be instrumental in furthering the interests of States and the international community in preserving outer space as an operationally safe, stable and conflict-free environment. Those delegations called upon member States to maintain a constructive and cooperative approach, with a view to ensuring that consolidation of the draft guidelines continued apace, as agreed by consensus.

177. Some delegations expressed the view that timely finalization of the guidelines was of paramount importance, in view of the proliferation of space debris and the increased risk of collisions of space objects, which posed a serious threat to the safety of space operations and the long-term sustainability of outer space activities.

178. The view was expressed that in finalizing the draft guidelines, the following principles should be preserved: long-term sustainability must be understood as a necessary prerequisite for the conduct of space activities in order to prevent any action that could affect, harm, damage or destroy space objects placed in orbit or on their way to orbit; outer space should be prevented from becoming an area of conflict among countries or involving any private or public organization; placement of weapons or any hostile action in outer space should be clearly recognized as

incompatible with the sustainable use of outer space; the adoption of space debris mitigation and removal measures must take into account the historical responsibilities of spacefaring nations, and emerging spacefaring nations should not, under any condition, be obliged to bear the burden or share the costs of space debris removal.

179. Some delegations expressed the view that the guidelines should not include any provisions that might limit or hamper access to space for nations with emerging space capabilities.

180. Some delegations expressed the view that the complexity of issues relating to the long-term sustainability of outer space activities, such as active space debris removal, required consideration from both a technical and a legal perspective. Those delegations called for greater involvement of the Legal Subcommittee.

181. Some delegations expressed the view that, once the guidelines were finalized, the Scientific and Technical Subcommittee was the appropriate forum for the exchange of information on their implementation.

182. The view was expressed that the draft guidelines should not use the term "space situational awareness", as it was interpreted differently by different space actors. The delegation expressing that view was also of the view that it would be more appropriate to use concrete terms for information needed in concrete situations, such as "trajectory of motion", "potentially hazardous conjunction" and "physical properties of objects".

183. The view was expressed that only the availability of aggregate information on the situation in space, space objects and space events would allow for the creation and application of a comprehensive international mechanism for ensuring the long-term sustainability of outer space activities.

184. Some delegations reaffirmed their position with regard to the feasibility of establishing an information platform under the auspices of the United Nations to gather information on objects and events in outer space and support the implementation of the future guidelines, in particular those that relate directly to the safety of space operations.

185. The Committee noted with appreciation that a regional workshop on the long-term sustainability of outer space activities had been hosted in San José on 7 and 8 April 2015 by the Secure World Foundation in collaboration with the Central American Association for Aeronautics and Space and with the support of the Ministry of Foreign Affairs of Costa Rica, and that it had been a valuable platform to advance regional space sustainability discussions within Latin America. The Committee also noted the first international conjunction assessment workshop addressing on-orbit collision risks had been hosted in Paris from 19 to 20 May 2015 by the Centre national d'études spatiales.

11. Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union

186. The Committee took note of the discussion of the Subcommittee under the item on the examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of ITU, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 260-270).

187. Some delegations expressed the view that the geostationary orbit was a limited natural resource that was at risk of becoming saturated, thereby threatening the sustainability of space activities in that environment; that its exploitation should be rationalized; and that it should be made available to all States, under equitable conditions, irrespective of their current technical capabilities, taking into particular account the needs of developing countries and the geographical position of certain countries. Those delegations were also of the view that it was important to use the geostationary orbit in compliance with international law, in accordance with the decisions of ITU and within the legal framework established in the relevant United Nations treaties.

188. Some delegations expressed the view that the geostationary orbit was part of outer space, that it was not subject to national appropriation by claim of sovereignty, by occupation or by any other means, including by means of use or repeated use, and that its utilization was governed by the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, and the ITU Constitution, Convention and Radio Regulations.

189. Some delegations expressed the view that, in order to ensure the sustainability of the geostationary orbit, it was necessary to keep the issue on the agenda of the Subcommittee and to explore it further, through the creation of appropriate working groups and legal and technical intergovernmental panels, as necessary.

12. Draft provisional agenda for the fifty-third session of the Scientific and Technical Subcommittee

190. The Committee took note of the discussion of the Subcommittee under the item on the draft provisional agenda for the fifty-third session of the Scientific and Technical Subcommittee, as reflected in the report of the Subcommittee (A/AC.105/1088, paras. 271-282).

191. The Committee endorsed the recommendations and decisions on the item made by the Subcommittee (A/AC.105/1088, paras. 273-278).

192. On the basis of the deliberations of the Subcommittee at its fifty-second session, the Committee agreed that the following items should be considered by the Subcommittee at its fifty-third session:

1. Election of the Chair.

2. General exchange of views and introduction of reports submitted on national activities.

3. United Nations Programme on Space Applications.

4. Space technology for socioeconomic development in the context of the United Nations Conference on Sustainable Development and the post-2015 development agenda.

5. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment.

6. Space debris.

7. Space-system-based disaster management support.

8. Recent developments in global navigation satellite systems.

9. Space weather.

10. Near-Earth objects.

11. Use of nuclear power sources in outer space.

    (Work for 2016 as reflected in the extended multi-year workplan of the Working Group (see A/AC.105/1065, para. 187 and annex II, para. 9))

12. Long-term sustainability of outer space activities.

    (Work for 2016 as reflected in the multi-year workplan of the Working Group (A/64/20, para. 161) and extended by the Committee at its fifty-seventh session (A/69/20, para. 199))

13. Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union.

    (Single issue/item for discussion)

14. Draft provisional agenda for the fifty-fourth session of the Scientific and Technical Subcommittee, including identification of subjects to be dealt with as single issues/items for discussion or under multi-year workplans.

193. The Committee agreed that the Working Group of the Whole, the Working Group on the Use of Nuclear Power Sources in Outer Space and the Working Group on the Long-term Sustainability of Outer Space Activities should be reconvened at the fifty-third session of the Scientific and Technical Subcommittee.

194. The Committee agreed that the topic for the symposium to be organized in 2016 by the Office for Outer Space Affairs, in accordance with the agreement reached by the Subcommittee at its forty-fourth session, in 2007 (A/AC.105/890, annex I, para. 24), should be "The role of industry in space exploration".

195. The Committee endorsed the agreement reached by the Asia-Pacific States that Chiaki Mukai (Japan) would serve as Chair of the Working Group of the Whole in 2016 while V. K. Dadhwal (India) held the position of Chair of the Subcommittee, and that in 2017, V. K. Dadhwal would continue his chairmanship of the Working Group of the Whole.

C. Report of the Legal Subcommittee on its fifty-fourth session

196. The Committee took note with appreciation of the report of the Legal Subcommittee on its fifty-fourth session (A/AC.105/1090), which contained the results of its deliberations on the items considered by the Subcommittee in accordance with General Assembly resolution 69/85.

197. The Committee expressed its appreciation to Kai-Uwe Schrogl (Germany) for his able leadership during the fifty-fourth session of the Subcommittee.

198. The representatives of Austria, Brazil, Canada, China, Colombia, the Czech Republic, Germany, Japan, Pakistan, the Republic of Korea, the Russian Federation, South Africa, the United States and Venezuela (Bolivarian Republic of) made statements under the item. Statements were also made under the item by the representative of Chile on behalf of the Group of 77 and China and on behalf of the Group of Latin American and Caribbean States. During the general exchange of views, statements relating to the item were also made by other member States.

199. Some delegations reiterated the need to strengthen interaction between the Scientific and Technical Subcommittee and the Legal Subcommittee in order to synchronize the progressive development of space law with key scientific and technical developments in that area. They also expressed the view that the results attained by the working groups established under the Scientific and Technical Subcommittee should be submitted officially to the Legal Subcommittee for analysis.

1. Information on the activities of international intergovernmental and non-governmental organizations relating to space law

200. The Committee took note of the discussion of the Subcommittee under the item on information on the activities of international intergovernmental and non-governmental organizations relating to space law, as reflected in the report of the Subcommittee (A/AC.105/1090, paras. 35-49).

201. The Committee noted the important role of international intergovernmental and non-governmental organizations and their contribution to its endeavours to promote the development of space law, and endorsed the recommendation of the Subcommittee that such organizations should again be invited to report to the Subcommittee at its fifty-fifth session on their activities relating to space law.

202. The Committee also noted that, in accordance with the decision of the Subcommittee, the International Institute for the Unification of Private Law (Unidroit) had made available to the Subcommittee information on recent developments in relation to the Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Space Assets (A/AC.105/1090, para. 47).

2. Status and application of the five United Nations treaties on outer space

203. The Committee took note of the discussion of the Subcommittee under the item on the status and application of the five United Nations treaties on outer space, as reflected in the report of the Subcommittee (A/AC.105/1090, paras. 50-74).

204. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, which had been reconvened under the chairmanship of Jean-François Mayence (Belgium) (A/AC.105/1090, para. 53, and annex I, paras. 13, 15 and 16).

205. Some delegations expressed the view that the United Nations treaties on outer space formed an indispensable legal basis for supporting the increasing scale of space activities and for strengthening international cooperation on the peaceful uses of outer space. Those delegations welcomed the growing adherence to the treaties and encouraged those States that had not yet become parties to the treaties to consider doing so.

206. The view was expressed that the rule of law was the fundamental guarantee for preserving outer space for peaceful purposes only and ensuring the long-term sustainability of outer space activities. In carrying out their space activities, all States should be guided by the United Nations treaties on outer space and relevant principles and declarations, and should abide by the law.

207. Some delegations expressed the view that the Committee should review, update and modify the five treaties for the purpose of strengthening the guiding principles of outer space activities, in particular those principles protecting its peaceful use, establish the responsibility of States in space activities carried out by both governmental and non-governmental entities and encourage international cooperation.

208. The view was expressed that a universal, comprehensive convention on outer space should be developed with the aim of finding solutions for existing issues, which would allow the international legal regime on outer space to be taken to the next level of its development.

209. The view was expressed that an approach oriented towards a universal, comprehensive convention on outer space would be counterproductive, as the principles contained in the existing space law instruments had established a framework that had encouraged the use and exploration of outer space for both spacefaring and non-spacefaring nations.

210. The view was expressed that to consolidate all normative rules pertinent to space activities, all sources of international space law, both formal and material, should be taken into account.

211. Some delegations expressed the view that, given the rapid increase in space activities and the emergence of new space actors, more coordination and synergy between the Legal Subcommittee and the Scientific and Technical Subcommittee were needed in order to promote the understanding, acceptance and application of the existing United Nations treaties and to strengthen the responsibility of States in carrying out space activities.

3. Matters relating to the definition and delimitation of outer space and the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union

212. The Committee took note of the discussion of the Subcommittee under the agenda item on matters relating to the definition and delimitation of outer space and the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of ITU, as reflected in the report of the Subcommittee (A/AC.105/1090, paras. 75-98).

213. The Committee endorsed the recommendations of the Subcommittee and its Working Group on the Definition and Delimitation of Outer Space, reconvened under the chairmanship of José Monserrat Filho (Brazil) (A/AC.105/1090, para. 78, and annex II, para. 17).

214. Some delegations expressed the view that further discussion under the item would help to bring clarity to the implementation of outer space law and airspace law, taking into consideration that space law is the only branch of international law that has no limited and defined area of application. Those delegations also expressed their readiness to continue participating constructively in substantive discussions on the matter and took the view that the Committee should reinvigorate its efforts to reach an agreement.

215. Some delegations welcomed the initiative of the Chair of the Working Group to define the term "space activities" — one of the areas yet to be regulated by space law — with the objective of building a consensus, even a preliminary one, while temporarily putting aside the task of defining and delimiting outer space.

216. The Committee noted with satisfaction that a joint aerospace symposium on the theme "Emerging space activities and civil aviation: challenges and opportunities" had been hosted by ICAO and the Office for Outer Space Affairs in Montreal, Canada, from 18 to 20 March 2015. The Committee noted that follow-up symposiums would be held in the United Arab Emirates in 2016 and in Vienna in 2017. The Committee also noted that the Office for Outer Space Affairs and ICAO would lead the learning group set up as a forum for discussion and that States members of the Committee would be invited to nominate their experts for membership in the learning group.

217. Some delegations expressed the view that scientific and technological progress, the commercialization of outer space, the participation of the private sector, emerging legal questions and the increasing use of outer space in general had made it necessary for the Subcommittee to consider the definition and delimitation of outer space. The delegations expressing that view were also of the view that the definition and delimitation of outer space would help to establish a single legal

regime regulating the movement of aerospace objects, bring about legal clarity in the implementation of space law and air law, and clarify the issues of the sovereignty and international responsibility of States and the boundary between airspace and outer space.

218. Some delegations expressed the view that the geostationary orbit — a limited natural resource clearly in danger of saturation — needed to be used rationally and should be made available to all States, irrespective of their current technical capacities. That would give States the possibility of access to the geostationary orbit under equitable conditions, bearing in mind, in particular, the needs and interests of developing countries, as well as the geographical position of certain countries, and taking into account the processes of ITU and relevant norms and decisions of the United Nations.

219. Some delegations expressed the view that the geostationary orbit was a limited natural resource with great potential for the implementation of a wide array of programmes for the benefit of all States and that it was at risk of becoming saturated, thereby threatening the sustainability of space activities in that environment; that its exploitation should be rationalized; and that it should be made available to all States, under equitable conditions, taking into particular account the needs of developing countries. Those delegations were also of the view that it was important to use the geostationary orbit in compliance with international law, in accordance with the decisions of ITU and within the legal framework established in the relevant United Nations treaties, while giving consideration to the contributions of space activities to sustainable development and the achievement of the Millennium Development Goals.

220. Some delegations expressed the view that the geostationary orbit was part of outer space, that it was not subject to national appropriation by a claim of sovereignty, by occupation or by any other means, including by means of use or repeated use, and that its utilization was governed by the Outer Space Treaty and ITU treaties.

221. Some delegations expressed the view that, in order to ensure the sustainability of the geostationary orbit, it was necessary to keep that issue on the agenda of the Subcommittee and to explore it further, through the creation of appropriate working groups and legal and technical intergovernmental panels, as necessary. Those delegations were also of the view that working groups or intergovernmental panels with technical and legal expertise should be established to promote equal access to the geostationary orbit, and called for the greater participation of ITU in the work of the Subcommittee on those matters.

4. National legislation relevant to the peaceful exploration and use of outer space

222. The Committee took note of the discussion of the Legal Subcommittee under the item on national legislation relevant to the peaceful exploration and use of outer space as reflected in the report of the Subcommittee (A/AC.105/1090, paras. 99-110).

223. The Committee noted with satisfaction that some States members of the Committee had already begun to implement the recommendations on national legislation relevant to the peaceful exploration and use of outer space contained in General Assembly resolution 68/74.

224. The Committee commended the Office for Outer Space Affairs and ITU for preparing a handout on issues related to registration, authorization, debris mitigation and frequency management with respect to small and very small satellites. The handout would become an important source of information for space actors intending to operate such satellites.

225. The Committee noted various activities of member States in strengthening or developing their national space laws and policies, as well as in reforming or establishing the governance of national space activities. In that connection, the Committee also noted that those activities were aimed at improving management, increasing competitiveness, involving academia, better responding to challenges posed by the development of space activities and better implementing international obligations.

226. The Committee noted with satisfaction the increasing number of space-related international cooperation programmes and projects, and stressed the importance of the development of space legislation by States, as national regulatory frameworks played a significant role in regulating and promoting such cooperation activities.

227. The view was expressed that it was important to take into account the increased level of commercial and private activities in outer space when developing a national space-related regulatory framework, particularly with respect to the responsibilities of States regarding their national space activities.

228. The Committee agreed that the general exchange of information on national legislation relevant to the peaceful exploration and use of outer space provided States with a comprehensive overview of the current status of national space laws and regulations and assisted States in understanding the different approaches taken at the national level with regard to the development of national space-related regulatory frameworks.

229. Some delegations expressed the view that all States should ensure that their national legislation on the exploration and use of outer space was closely aligned with the relevant international treaties. Those delegations were also of the view that the promotion of laws and regulations relating to the commercialization of outer space, which is the heritage of humankind and belongs to all States under equitable conditions, should be avoided.

5. Capacity-building in space law

230. The Committee took note of the discussion of the Subcommittee under the item on capacity-building in space law, as reflected in the report of the Subcommittee (A/AC.105/1090, paras. 111-134).

231. The Committee endorsed the recommendation of the Subcommittee on the agenda item (A/AC.105/1090, para. 134).

232. The Committee agreed that international cooperation in research, training and education in space law was essential in order to further develop space activities and increase knowledge of the legal framework within which space activities were carried out.

233. The Committee noted that more efforts were needed to increase awareness of space law and its importance to space activities and programmes. Endeavours in that

area such as the holding of workshops and the development of a curriculum played a vital role in building relevant capacity.

234. The Committee reaffirmed that the regional centres for space science and technology education, affiliated to the United Nations, played an important role in providing teaching and training opportunities in space law. The Committee noted that greater use of the regional centres could be made in order to provide more opportunities for academic linkages.

235. The Committee noted with appreciation the holding of the ninth United Nations workshop on space law on the theme "The role of national space legislation in strengthening the rule of law". The workshop, held in Beijing from 17 to 21 November 2014, had been hosted by the Government of China and organized jointly by the Office for Outer Space Affairs, APSCO and the China National Space Administration.

236. The Committee noted with appreciation that the next APSCO Space Law and Policy Forum would be held in Beijing from 21 to 23 September 2015 and would be co-hosted by APSCO and the Institute of Space Law of the Beijing Institute of Technology. The Forum would focus on regional space cooperation and the latest developments in space law and policy.

237. The Committee reaffirmed its satisfaction at the completion of the education curriculum on space law and the updated web-based compilation of reading materials, found on the website of the Office for Outer Space Affairs. It welcomed the recent translation of the curriculum into all official United Nations languages.

6. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space

238. The Committee took note of the discussion of the Subcommittee under the item on the review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, as reflected in the report of the Subcommittee (A/AC.105/1090, paras. 135-153).

239. Some delegations expressed the view that it was exclusively States, irrespective of their level of social, economic, scientific or technical development, that had an obligation to engage in regulatory activity associated with the use of nuclear power sources in outer space and to adapt national legislation to relevant international standards. Those delegations were also of the view that Governments bore international responsibility for national activities involving the use of nuclear power sources in outer space conducted by governmental and non-governmental organizations and that such activities must be beneficial, not detrimental, to humanity.

240. Some delegations called on the Legal Subcommittee to undertake a review of the Safety Framework for Nuclear Power Source Applications in Outer Space and to promote binding standards, with a view to ensuring the responsible use of nuclear power sources.

241. Some delegations expressed the view that there should be greater coordination and interaction between the Scientific and Technical Subcommittee and the Legal Subcommittee in order to promote greater understanding, acceptance and

implementation of the legal instruments and the development of new legal instruments related to the use of nuclear power sources in outer space.

242. Some delegations expressed the view that more consideration should be given to the use of nuclear power sources in outer space, specifically in the geostationary orbit and low-Earth atmosphere, in order to address the legal aspects of the problem of potential collisions of nuclear-powered space objects in orbit and the incidents or emergencies that could be created by the accidental re-entry of such objects into the Earth's atmosphere, as well as the impact of such a re-entry on the Earth's surface, human life and health and the ecosystem.

7. General exchange of information and views on legal mechanisms relating to space debris mitigation measures, taking into account the work of the Scientific and Technical Subcommittee

243. The Committee took note of the discussion of the Legal Subcommittee under the item on the general exchange of information and views on legal mechanisms relating to space debris mitigation measures, taking into account the work of the Scientific and Technical Subcommittee, as reflected in the report of the Legal Subcommittee (A/AC.105/1090, paras. 154-184).

244. The Committee endorsed the decisions of the Subcommittee as contained in its report (A/AC.105/1090, para. 184).

245. The Committee noted the increasing amount of space debris and noted with satisfaction that the endorsement by the General Assembly, in its resolution 62/217, of the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space[3] was a key step in providing all spacefaring nations with guidance on how to mitigate the problem of space debris, and encouraged Member States to consider voluntary implementation of the Guidelines.

246. The Committee noted with satisfaction that some States had taken measures to enforce the implementation of internationally recognized guidelines and standards relating to space debris through relevant provisions in their national legislation.

247. The Committee expressed its appreciation to Canada, the Czech Republic and Germany for the development of the compendium of space debris mitigation standards adopted by States and international organizations, and to the Secretariat for maintaining the compendium on a dedicated page of the website of the Office for Outer Space Affairs.

248. The Committee agreed that States members of the Committee and international intergovernmental organizations having permanent observer status with the Committee should be invited to further contribute to the compendium of space debris mitigation standards adopted by States and international organizations by providing or updating the information on any legislation or standards adopted with regard to space debris mitigation, using the template provided for that purpose. The Committee also agreed that all other States Members of the United Nations should be invited to contribute to the compendium and encouraged States with such regulations or standards to provide information on them.

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[3] *Official Records of the General Assembly, Sixty-second Session, Supplement No. 20* (A/62/20), paras. 117 and 118 and annex.

249. Some delegations expressed the view that it was of the utmost importance to continue treating the legal aspects of issues related to space debris as a priority by discussing legal matters related to the generation of space debris and regulating its mitigation and removal. Those delegations were of the view that mitigation measures should not lead to the adoption of overly high standards or thresholds that would impede the development of the capacities of developing countries.

250. Some delegations expressed the view that it was necessary to strengthen the interaction between the Scientific and Technical Subcommittee and the Legal Subcommittee in order to synchronize the progressive development of space law with major progress in space science and technology, and that outcomes of the work of working groups of the Scientific and Technical Subcommittee, in particular the Space Debris Mitigation Guidelines of the Committee, should be officially presented to the Legal Subcommittee for legal analysis regarding compliance with principles on outer space.

8. General exchange of information on non-legally binding United Nations instruments on outer space

251. The Committee took note of the discussion of the Subcommittee under the item entitled "General exchange of information on non-legally binding United Nations instruments on outer space", as reflected in the report of the Subcommittee (A/AC.105/1090, paras. 185-203) and endorsed the decisions of the Subcommittee as contained in its report (A/AC.105/1090, para. 203).

252. The Committee noted that existing non-legally binding United Nations instruments related to space activities had played an important role in complementing and supporting the United Nations treaties on outer space and served as an important means to address emerging challenges, such as the safe and sustainable use of outer space, but could not serve as a substitute for the existing legally binding instruments.

253. The view was expressed that further discussion under the agenda item should not be used as a means to review the implementation by member States of non-legally binding instruments, as the observance of those instruments was voluntary.

254. The Committee welcomed the efforts by the delegation of Japan to promote the exchange of views under the agenda item of the Subcommittee further by simplifying the questionnaire contained in A/AC.105/C.2/2015/CRP.24/Rev.1, and encouraging States members of the Committee and international organizations having permanent observer status with the Committee to respond, on a voluntary basis and as appropriate, to that questionnaire, and to submit their responses to the delegation. The delegation of Japan had been invited to prepare a compilation of responses to be submitted to the Subcommittee during its fifty-fifth session, in 2016 (A/AC.105/1090, para. 191).

255. Some delegations expressed the view that there remained a significant divergence of opinion regarding the scope and substance of deliberations under the agenda item of the Subcommittee. Those delegations also welcomed the agreement by the Subcommittee to retain the item on the agenda of the Subcommittee at its fifty-fifth session to continue the debate on both its substance and scope.

256. The view was expressed that it was necessary for the Committee to confirm that the mandate of the Legal Subcommittee allowed its members to discuss any international space law instruments, including those under development.

257. Some delegations expressed the view that the discussion under the agenda item should not be confined to examining solely the non-legally binding United Nations instruments, but all non-legally binding instruments related to space activities, which included existing ones as well as those under development. That included discussions on the European Union-led initiative on a draft international code of conduct for outer space activities, which should be conducted in a transparent way within the United Nations, in particular in the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space.

258. Some delegations expressed the view that the preparations for the meeting convened by the European Union in July 2015 in New York to discuss a draft proposal for a code of conduct had caused concern among Member States. It was mentioned that, except for the venue and date of the meeting, no substantive information on the way the meeting would be conducted and no proposed text had been circulated to date, making it difficult for countries to adequately prepare for the meeting.

259. Some delegations were of the view that the Subcommittee should go beyond the discussion of non-legally binding instruments and aim at developing new legally binding rules pertaining to outer space activities, in order to reduce the legal uncertainties faced by both spacefaring and emerging spacefaring nations.

9. Review of international mechanisms for cooperation in the peaceful exploration and use of outer space

260. The Committee took note of the discussion of the Legal Subcommittee under the item on the review of international mechanisms for cooperation in the peaceful exploration and use of outer space, in accordance with its five-year workplan, as reflected in the report of the Subcommittee (A/AC.105/1090, paras. 204-216).

261. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group on the Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space, which had been reconvened by the Subcommittee at its fifty-fourth session, under the chairmanship of Setsuko Aoki (Japan) (A/AC.105/1090, para. 206, and annex III, paras. 9-10).

262. The Committee noted the breadth and diversity of the mechanisms utilized in space cooperation, including multilateral and bilateral legally binding agreements; memorandums of understanding; non-legally binding arrangements; principles and technical guidelines; multilateral coordination mechanisms through which space-system operators coordinated the development of applications of space systems for the benefit of the environment, human security and welfare, and development; and mechanisms facilitating a variety of international and regional organizations and forums.

263. The Committee also noted that the review of mechanisms for cooperation in space activities would allow for a clear overview to be gained of the different forms of international cooperation in space activities being undertaken and for analysis of

their success. The Committee further noted that the review would contribute to the strengthening of international cooperation in the exploration and peaceful uses of outer space.

264. The Committee noted with satisfaction that the exchange of information under the item demonstrated the broad range of international cooperative mechanisms employed by States members of the Committee and that common principles and procedures had emerged through that exchange, as member States examined the various potential mechanisms to facilitate future cooperation in the exploration and peaceful uses of outer space.

10. Draft provisional agenda for the fifty-fifth session of the Legal Subcommittee

265. The Committee took note of the discussion of the Subcommittee under the item on proposals to the Committee for new items to be considered by the Legal Subcommittee at its fifty-fifth session, as reflected in the report of the Subcommittee (A/AC.105/1090, paras. 220-225).

266. On the basis of the deliberations of the Legal Subcommittee at its fifty-fourth session, the Committee agreed that the following substantive items should be considered by the Subcommittee at its fifty-fifth session:

Regular items

1. Election of the Chair.
2. General exchange of views.
3. Information on the activities of international intergovernmental and non-governmental organizations relating to space law.
4. Status and application of the five United Nations treaties on outer space.
5. Matters relating to:
   (a) The definition and delimitation of outer space;
   (b) The character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union.
6. National legislation relevant to the peaceful exploration and use of outer space.
7. Capacity-building in space law.

Single issues/items for discussion

8. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.
9. General exchange of information and views on legal mechanisms relating to space debris mitigation measures, taking into account the work of the Scientific and Technical Subcommittee.

10. General exchange of information on non-legally binding United Nations instruments on outer space.

11. General exchange of views on the legal aspects of space traffic management.

12. General exchange of views on the application of international law to small satellite activities.

Items considered under workplans

13. Review of international mechanisms for cooperation in the peaceful exploration and use of outer space.

(Work for 2016 as reflected in the multi-year workplan in the report of the Legal Subcommittee on its fifty-first session (A/AC.105/1003, para. 179))

New items

14. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its fifty-sixth session.

267. The Committee agreed that the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, the Working Group on the Definition and Delimitation of Outer Space and the Working Group on the Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space should be reconvened at the fifty-fifth session of the Legal Subcommittee.

268. The Committee also agreed that the Subcommittee should review, at its fifty-fifth session, the need to extend beyond that session the mandate of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space.

269. The Committee commended Jean-François Mayence (Belgium), the outgoing Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, for his dedication in chairing the Working Group and his tireless efforts in moving the discussions in the Working Group forward.

270. The Committee endorsed the agreement reached by the Western European and other States that Bernhard Schmidt-Tedd (Germany) would serve as Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space.

271. The Committee agreed that IISL and the European Centre for Space Law should be invited to organize a symposium on space law at the fifty-fifth session of the Subcommittee.

D. Space and sustainable development

272. The Committee considered the agenda item entitled "Space and sustainable development", in accordance with General Assembly resolution 69/85.

273. The representatives of Brazil, Egypt, France, Germany, India, Indonesia, Japan, Mexico, Pakistan, South Africa, the United States and Venezuela (Bolivarian Republic of) made statements under the item. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

274. The Committee had before it a conference room paper entitled "Update on the recent developments in the context of the United Nations Conference on Sustainable Development and the post-2015 development agenda" (A/AC.105/2015/CRP.13).

275. The Committee heard a presentation by the representative of India entitled "Use of space technology inputs for sustainable development in India: an update".

276. The Committee noted that space science and technology applications could play a significant role in enhancing environmental sustainability and socioeconomic development for all countries. The Committee also noted the value of space technology and applications and space-derived data and information in contributing to sustainable development, including by improving the formulation and subsequent implementation of policies and programmes of action in connection with land and water management, marine and coastal ecosystems, health care, climate change, disaster risk reduction and emergency response, energy, navigation, seismic monitoring, natural resources management, biodiversity, agriculture and food security.

277. The Committee also noted the information provided by States on their actions and programmes aimed at increasing awareness and understanding in society of the applications of space science and technology for meeting development needs.

278. The Committee further noted the continued role played by the International Space Station in education and outreach to educational communities worldwide.

279. The Committee noted with satisfaction the large number of outreach activities carried out at the regional level for building capacity through education and training in using space science and technology applications for sustainable development. The Committee also noted with appreciation the role played in space-related education by the regional centres for space science and technology education, affiliated to the United Nations.

280. The Committee noted a number of space-related conferences, competitions, exhibitions, symposiums and seminars worldwide that connected educators and students and provided them with training and educational opportunities.

281. The Committee commended the Secretariat for continuously providing updates on the implementation of the outcomes of the United Nations Conference on Sustainable Development at the intergovernmental level and the formulation of the post-2015 development agenda, as contained in conference room papers A/AC.105/2013/CRP.7, A/AC.105/2014/CRP.15, A/AC.105/C.1/2014/CRP.21, A/AC.105/C.1/2015/CRP.26 and A/AC.105/2015/CRP.13.

282. The Committee requested the Office for Outer Space Affairs to continue taking an active part in the United Nations System Task Team on the Post-2015 United Nations Development Agenda and other inter-agency mechanisms for the processes related to the United Nations Conference on Sustainable Development and the post-2015 development agenda, within its capacities, in order to promote the

inclusion of space-related references and elements in the documentation generated by the United Nations Secretariat under those processes.

283. Some delegations expressed the view that it was essential to promote international cooperation and strengthen intraregional cooperation, exchange expertise and best practices and build capacity at the national and regional levels, as international and regional cooperation in the field of space activities could generate synergies and create awareness of the benefits that space science and technology provided for sustainable development.

284. The view was expressed that the Committee should facilitate the adequate representation of space-related capacities in international, regional and national sustainable development processes, and their institutional integration into those processes.

285. The view was expressed that the development of space technology should be further encouraged and affirmed as a crucial element in the post-2015 development agenda.

286. The view was expressed that the international community should enhance mutual partnerships and continue to provide technical assistance to Member States, in particular developing countries, including by providing adequate resources for, transferring knowledge about and building capacity in space technology.

E. Spin-off benefits of space technology: review of current status

287. The Committee considered the agenda item entitled "Spin-off benefits of space technology: review of current status", in accordance with General Assembly resolution 69/85.

288. The representatives of Brazil, Canada, Colombia, India, Italy, Japan, the Republic of Korea and the United States made statements under the item.

289. The Committee heard the following technical presentations under the item:

(a) "Space life science: the fallout on Earth", by the representative of Italy;

(b) "Examples of Canadian spin-offs and spin-ins from space technologies", by the representative of Canada;

(c) "Simultaneously observed ionospheric disturbances and abnormal animal behaviour previous to increased seismic activity", by the representative of Brazil.

290. The Committee took note of the information provided by States on their national practices regarding spin-offs from space technology that had resulted in the introduction of strategies for the management of regional economic development. It also took note of innovations in numerous scientific areas, such as medicine, dentistry, biology, chemistry and materials sciences. It further took note of practical applications in civil society, such as the use of enhanced robotics in medicine and of colour photometry to monitor water levels for the benefit of agriculture, and the use of enhanced technologies to reduce energy consumption, improve techniques in lubrication, cutting and drilling, and to facilitate resource exploration, infrastructure improvements, firefighting, geographical positioning, navigation and the tracking of search and rescue personnel.

291. The Committee agreed that spin-offs from space technology constituted a powerful engine for technological innovation and growth in both the industrial and the service sectors. It also agreed that spin-offs could be applied to achieve social and economic objectives and sustainable development goals.

292. The Committee noted that Governments had developed national policies directed specifically at disseminating space technologies and actively promoting spin-offs by streamlining licensing and procedures to protect intellectual property to facilitate and support the market entry of products derived from space technology by start-up companies.

293. The Committee agreed that the use of spin-offs from space technology should be further promoted because it had fostered the development of innovative technologies in other sectors, thus advancing national economies and contributing to a better quality of life.

294. The Committee noted that Governments had successfully involved the private sector and academia in various projects in which spin-offs from space technology were put to use.

295. The publication of the National Aeronautics and Space Administration "Spin-off 2015" was made available to the Committee.

F. Space and water

296. The Committee considered the agenda item entitled "Space and water", in accordance with General Assembly resolution 69/85.

297. The representatives of Egypt, France, India, Japan, Pakistan and the United States made statements under the item. During the general exchange of views, statements relating to the item were also made by other member States.

298. The Committee heard presentations on the following topics:

(a) Space-based technology for water: activities and achievements of the Italian Space Agency, by the representative of Italy;

(b) The ResEau Project: production of a hydrogeological atlas of Chad from optical and radar satellite imagery, by the representative of Switzerland.

299. In the course of the discussion, delegations reviewed national and cooperative water-related activities, giving examples of national programmes and bilateral, regional and international cooperation.

300. The Committee noted that water and the issues related to it were becoming one of the most critical environmental problems facing humankind, often with political implications, and that the conservation and proper utilization of existing water resources were of paramount importance for sustaining life on Earth. In that connection, space-derived data could support policymakers in making informed decisions on water resources management.

301. The Committee noted that a large number of space-borne platforms addressed water-related issues and that space-derived data were used extensively in water management. The Committee also noted that space technology and applications,

combined with non-space technologies, played an important role in addressing many water-related issues, including the observation and study of global water cycles and unusual climate patterns, the mapping of water courses, the monitoring of glaciers, the estimation of snowmelt run-offs, the planning and management of reservoirs and irrigation projects, the monitoring and mitigation of the effects of floods, droughts and cyclones and improving the timeliness and accuracy of forecasts.

302. The Committee noted that the Asian Water Cycle Initiative, an endeavour by the Group on Earth Observations (GEO), continued developing an information system of systems to promote the implementation of integrated water resources management in 20 Asian countries through the integration and sharing of data as a basis for decision-making with regard to national water policies.

G. Space and climate change

303. The Committee considered the agenda item entitled "Space and climate change", in accordance with General Assembly resolution 69/85.

304. The representatives of Algeria, Egypt, France, Indonesia, Japan, Pakistan, South Africa, the Republic of Korea and the United States made statements under the item. A statement was also made by the observer for El Salvador. During the general exchange of views, statements relating to the item were also made by representatives of other member States and permanent observers.

305. The Committee heard a presentation entitled "Use of Earth observation inputs for climate change studies in India", by the representative of India.

306. The Committee welcomed the panel discussion organized by France entitled "Space and climate change: tools for characterizing climate change, helping societies and fostering adaptation", held on the margins of its current session. The panel discussion underlined the key role of space tools in the negotiations leading up to the twenty-first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, to be held in Paris from 30 November to 11 December 2015.

307. The Committee further welcomed the intention expressed during the panel discussions by the representatives of space agencies to adopt a joint declaration on climate change and disaster management at the event entitled "Heads of space agencies summit on climate change and disaster management", organized by the International Academy of Astronautics, to be hosted by the Mexican Space Agency in Mexico City on 17 and 18 September 2015. Such a joint declaration would be submitted as an official contribution to the Conference of the Parties and would present an additional opportunity for the Committee to reiterate its long-standing position that space science and space applications are of vital importance for improving fundamental knowledge of the universe and for improving the daily lives of people worldwide, as stated in the resolution adopted in 1999 by the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space entitled "The Space Millennium: Vienna Declaration on Space and Human Development".

308. The Committee noted the continued alarming trend in global warming, as indicated in the report of the Intergovernmental Panel on Climate Change (IPCC) entitled "Climate change 2014: impacts, adaptation, and vulnerability", and the

adverse impacts of climate change on all nations, in particular developing nations, which were affected disproportionately.

309. The Committee noted the crucial and ever-increasing role of satellite-based global weather and climate observation data for observing climate change, mitigating its causes and adapting to its consequences. The Committee underscored the importance of bilateral and multilateral partnerships in activities related to climate change and in the area of Earth observation, such as the efforts undertaken by the World Meteorological Organization (WMO), GEO and the Committee on Earth Observation Satellites at its 28th plenary meeting, held from 28 to 30 October 2014 in Tromsø, Norway, and stressed its commitment to monitoring the climate from space through coordinated planning, production, improvement and availability of space-based data records on a global scale.

310. The Committee also noted the importance of global initiatives aimed at providing support to combating climate change through the use of space tools, such as the Global Climate Observing System, which provides support to the United Nations Framework Convention on Climate Change, the Coordination Group for Meteorological Satellites, the World Climate Research Programme and IPCC. The Committee further noted that in pursuing efforts to achieve a global response to climate change, coordination between the activities of the Committee and those of the United Nations Framework Convention on Climate Change should be strengthened.

311. The Committee noted that space-derived data, together with ground-based observations, provided an integrated perspective on the changing environment of the Earth and were crucial for gaining an understanding of the implications of global climate change for humankind. The Committee also noted that more should be done to promote the use of space applications in efforts to adapt to climate change and minimize its adverse impacts. The Committee further noted that successful national climate change adaptation policies should be integrated into the post-2015 development agenda.

312. The Committee recognized the importance of regional initiatives such as the initiative of the Asia-Pacific Regional Space Agency Forum entitled "Space applications for the environment", which encouraged the use of space applications in environmental monitoring for climate change mitigation and adaptation.

313. The Committee noted that a number of conferences were scheduled to take place in the lead-up to the twenty-first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, such as the international conference organized by the Algerian Space Agency entitled "Climate change, a reality to be considered in development trajectories: modelling, space tools and adaptation", to be held from 4 to 6 October 2015 in Algiers. The conference would focus on the impact of climate change in the Mediterranean region and aim to strengthen regional cooperation on the issue.

314. The Committee noted a number of ongoing national efforts to build, launch and operate Earth-observation satellites to track the manifestations and effects of climate change and the continued readiness on the part of spacefaring nations to share Earth observation data freely and openly.

H. Use of space technology in the United Nations system

315. The Committee considered the agenda item entitled "Use of space technology in the United Nations system", in accordance with General Assembly resolution 69/85.

316. The representatives of India, Indonesia, Japan and the Republic of Korea made statements under the item. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

317. The Committee heard presentations on the following topics:

(a) China's manned space programme, by the representative of China;

(b) Progress report of the Regional Centre for Space Science and Technology Education in Asia and the Pacific (China), by the representative of China;

(c) Utilizing space and geographic information system applications for effective disaster risk management: practices of the Economic and Social Commission for Asia and the Pacific (ESCAP) in Asia and the Pacific, by the observer for ESCAP.

318. The Director of the Office for Outer Space Affairs made a statement informing the Committee about the outcome of the thirty-fifth session of the Inter-Agency Meeting on Outer Space Activities (UN-Space), held in Bonn, Germany, on 27 and 28 May 2015.

319. The Committee welcomed the agreement of UN-Space that the focus of the report of the Secretary-General on the coordination of space-related activities within the United Nations system for the period 2016-2017 should be on assisting the Committee in its preparations for the fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space ("UNISPACE+50"), which would be a major element of the sessions of the Committee and its subsidiary bodies in 2018, and to provide an overview of efforts by United Nations entities aimed at contributing to the main pillars of "UNISPACE+50" and at promoting international cooperation in the peaceful uses of outer space.

320. The Committee welcomed with appreciation the UN-Space special report on space for global health (A/AC.105/1091).

321. The Committee noted with satisfaction that the twelfth open informal session of UN-Space had been organized as an integral part of the joint United Nations/Germany International Conference on Earth Observation: Global Solutions for the Challenges of Sustainable Development in Societies at Risk, held in Bonn, Germany, from 26 to 28 May 2015. The event, held as a joint UN-Space-Bonn Conference high-level panel on space-based information for development, provided an opportunity for the participants to engage in a dialogue with the United Nations system to review challenges and opportunities in mainstreaming Earth observations into key areas under the post-2015 development framework, and to examine common perspectives for increasing the use of space-derived information for the attainment of global development goals.

322. The Committee noted the cooperative efforts between member States and United Nations entities to promote the use of space technology to resolve global issues faced by humanity, including in building the resilience of nations to multiple shocks. In that connection, the Committee took note of the adoption in Japan in March 2015 of the Sendai Framework for Disaster Risk Reduction 2015-2030, and the activities under the Asia-Pacific Plan of Action for Applications of Space Technology and Geographic Information Systems for Disaster Risk Reduction and Sustainable Development, 2012-2017.

323. The Committee requested the Office for Outer Space Affairs to further promote, through United Nations entities, the increased practical application of space science and technology for development, in view of the catalytic role that such application could play for development in the post-2015 context.

I. Future role of the Committee

324. The Committee considered the agenda item entitled "Future role of the Committee", in accordance with General Assembly resolution 69/85.

325. The representatives of Canada, Chile, China, the Czech Republic, Italy, Japan, Mexico, Poland, the Russian Federation, Switzerland, the United Kingdom, the United States, Venezuela (Bolivarian Republic of) and Viet Nam made statements under the item. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

326. The Committee heard a presentation entitled "Japan's contribution to post-millennium development goals through Earth observation", by the representative of Japan.

1. Joint ad hoc meeting of the First and Fourth Committees of the General Assembly

327. The Committee welcomed the joint ad hoc meeting of the First and Fourth Committees of the General Assembly, to be convened by the Assembly in accordance with its resolution 69/38. The meeting was to address possible challenges to space security and the long-term sustainability of space activities.

328. The Committee noted that the joint ad hoc meeting would be held on 22 October 2015 in the afternoon, and that it would be chaired by the Presidents of the First and Fourth Committees. The Presidents would issue a summary of the debate in accordance with the practices of the General Assembly.

329. The Committee noted that a decision on the format of the joint ad hoc meeting would be made by the Bureaux of the First and Fourth Committees. It requested the Secretariat to communicate to the Bureaux the recommendations made by the Committee and subsequently inform States members of the Committee about the decision made.

330. The Committee recommended that the joint ad hoc meeting should comprise a panel discussion followed by general debate. The panel should comprise the Chair of the Group of Governmental Experts on Transparency and Confidence-Building

Measures in Outer Space Activities, the High Representative for Disarmament Affairs and the Director of the Office for Outer Space Affairs.

331. The Committee recommended that the following subtopics should be addressed in the joint ad hoc meeting: space debris, space weather, the long-term sustainability of outer space activities, and transparency and confidence-building measures in outer space activities.

332. The Committee requested the Office for Outer Space Affairs to report to the joint ad hoc meeting on how the Committee was implementing the recommendations given by the Group of Governmental Experts in its report by working to ensure the long-term sustainability of outer space activities.

333. The Committee suggested that concrete outcomes of the joint ad hoc meeting could include the regular exchange of information between the Office for Outer Space Affairs, the Office for Disarmament Affairs and other relevant United Nations entities.

334. The Committee encouraged increased cooperation between the disarmament and civilian space communities in order to address possible challenges to space security and sustainability.

335. The Committee noted that the note by the Secretariat entitled "Recommendations of the Group of Governmental Experts on Transparency and Confidence-building Measures in Outer Space Activities: views of States members of the Committee on the Peaceful Uses of Outer Space" (A/AC.105/1080 and Add.1 and 2) would be made available to the joint ad hoc meeting.

336. The view was expressed that, in line with General Assembly resolution 68/50, on transparency and confidence-building measures in outer space activities, the Committee could provide the joint ad hoc meeting with a report on the practical measures undertaken by States members of the Committee relating to the recommendations of the Group of Governmental Experts. The report could summarize responses to the questionnaire distributed to member States regarding such practical measures and would be circulated in advance among the member States that had contributed to the report, so that it could be updated and then submitted to the joint ad hoc meeting.

337. The view was expressed that the joint ad hoc meeting could be a good opportunity for Member States to suggest better ways to deal with space issues that have implications for the mandate of both Committees, such as the non-militarization of outer space and its preservation for peaceful purposes only.

338. The view was expressed that the joint ad hoc meeting could discuss, among other things, the implementation of transparency and confidence-building measures proposed in the report of the Group of Governmental Experts, the development of a universally accepted international code of conduct and the interpretation of the right to self-defence in outer space.

2. UN-Space and the report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities

339. The Committee requested the Secretariat to issue a special report by UN-Space for consideration by the Committee at its fifty-ninth session on the implementation

of the report of the Group of Governmental Experts as pertaining to the United Nations system, and to coordinate the preparation of that report with relevant United Nations entities. The report should note how United Nations entities supported the implementation of transparency and confidence-building measures in outer space activities in accordance with their existing mandates, and identify how United Nations entities could assist Member States in implementing the recommendations of the Group. The report should also address means to coordinate the work of United Nations entities in line with the overall recommendations of the report of the Group as endorsed by the General Assembly in its resolution 68/50.

3. Exchange of views on the future role of the Committee

340. The Committee noted that some delegations had proposed that an expert group on space objects and events be set up under the Scientific and Technical Subcommittee and that it have a rapporteur. It could build upon, inter alia, the report of Expert Group B of the Subcommittee's Working Group on the Long-term Sustainability of Outer Space Activities. It could focus on issues associated with information-sharing, and with the analysis and interpretation of information required to support the safety of space operations. It could explore and propose options for international cooperation mechanisms and procedures, as necessary, that would function under the auspices of the United Nations and could serve, as appropriate, the purpose of implementing the future guidelines on long-term sustainability as regards safety of space operations. The Committee further noted that no Secretariat services would be required. However, the Office for Outer Space Affairs should be substantively involved with the expert group.

341. The view was expressed that, owing to the growing number of actors in outer space and the diversification of outer space activities, there were a number of cross-cutting issues that the Committee should address, as it was the appropriate forum for resolving issues pertaining to space law, ensuring the safety and security of outer space, and making certain that the potential benefits of space science and technology were distributed equitably.

342. The view was expressed that the Committee was in a position to address, on a priority basis, the issue of working out a common understanding concerning legal grounds and modalities for resorting, in hypothetical cases, to self-defence, in accordance with the Charter of the United Nations as applied to outer space. The delegation expressing that view also noted that such subject matter would fully meet the criteria worked out by the Committee for reaching a common understanding of the topics that may be discussed under the agenda item on the ways and means of maintaining outer space for peaceful purposes.

343. The view was expressed that the Committee was the main platform for undertaking the development of an effective set of tools that would ensure the safe and responsible conduct of outer space activities, and for undertaking an assessment of the practical use of the recommendations contained in the report of the Group of Governmental Experts. Many of those recommendations could be converted into regulatory measures and could be implemented as future guidelines for the conduct of outer space activities.

344. The view was expressed that strengthening the rule of law in outer space, promoting international cooperation in outer space, capacity-building and the

long-term sustainability of outer space activities represented the core of the Committee's work. The view was expressed that the Committee should improve the efficiency and effectiveness of its work by aligning itself with new developments in outer space activities so as to make progress in the following areas: strengthening the rule of law in outer space by focusing on promoting the practical application of existing outer space treaties; improving capacity-building by encouraging the full utilization of the initiatives of the Office for Outer Space Affairs, such as the Basic Space Science Initiative, the Human Space Technology Initiative and the seminars on space law undertaken by the Office; enabling technology transfers and eliminating technology embargos; and extending the support of the Office to the regional centres for space science and technology education, affiliated to the United Nations, to deepen international cooperation with a clear focus on the needs of developing countries and the promotion of action-oriented, project-based, equal and mutually beneficial cooperation so as to enable the further development of outer space activities.

345. The view was expressed that the Committee should continue to promote regional and interregional cooperation and strengthen its engagement with space-related regional mechanisms and initiatives, and that it should also examine new forms of cooperation to advance space utilization, with a special focus on collaboration between spacefaring and emerging spacefaring nations to bridge the development gap and work jointly towards the implementation of the post-2015 development agenda.

346. The view was expressed that the Committee should continue to work on elaborating and implementing future procedures to allow for greater efficiency and transparency in its work.

J. Other matters

347. The Committee considered the agenda item entitled "Other matters", in accordance with General Assembly resolution 69/85.

348. The representatives of Algeria, Argentina, Australia, Austria, Brazil, Bulgaria, Canada, Chile, China, Colombia, Costa Rica, Cuba, the Czech Republic, Ecuador, Egypt, France, Germany, Hungary, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Kenya, Lebanon, Luxembourg, Mexico, the Netherlands, Peru, Poland, Portugal, Romania, the Russian Federation, Saudi Arabia, Slovakia, the Sudan, Switzerland, the Syrian Arab Republic, Tunisia, Turkey, the United Kingdom, the United States and Venezuela (Bolivarian Republic of) made statements under the item. Statements were also made under the item by the representative of Egypt on behalf of the League of Arab States, and by the representative of Luxembourg on behalf of the European Union. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

349. The Committee heard a presentation entitled "Space education for young people", by the representative of France.

1. Fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space

350. The Committee had before it a note by the Secretariat entitled "Fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space: theme of the sessions of the Committee on the Peaceful Uses of Outer Space, its Scientific and Technical Subcommittee and its Legal Subcommittee in 2018" (A/AC.105/L.297).

351. The Committee welcomed the proposals contained in the note and endorsed the plan of work contained in it, agreeing that the Secretariat should begin the preparatory work in the lead-up to the fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space in 2018 ("UNISPACE+50"), in close consultation with the group composed of the members of the bureaux of the Committee and its subsidiary bodies (the "Group of 15"), which together with the chairs of the working groups of the Committee and its subsidiary bodies and the Director of the Office for Outer Space Affairs would serve as the steering committee for the preparations for "UNISPACE+50" (see A/AC.105/L.297, para. 15 (a)). The Committee also encouraged the Secretariat to work with the Committee on Space Research, the International Aeronautical Federation and the International Academy of Astronautics in preparing the background documents for "UNISPACE+50".

352. The Committee requested the Secretariat to report to the Committee and its Subcommittees, at their respective sessions in 2016, on the progress made in the preparatory work.

2. Composition of the bureaux of the Committee and its subsidiary bodies for the period 2016-2017

353. The Committee noted the nominations by the Asia-Pacific States, the Eastern European States, the Latin American and Caribbean States and the Western European and other States of their candidates for the offices of Chair of the Scientific and Technical Subcommittee, First Vice-Chair of the Committee, Chair of the Legal Subcommittee and Chair of the Committee, respectively, for the period 2016-2017, as per General Assembly resolution 69/85, para. 29.[4]

354. The Committee also noted that the African States had decided that the Sudan would nominate its representative for the office of Second Vice-Chair/Rapporteur of the Committee for the period 2016-2017. In that regard, the Committee asked the Sudan to nominate its representative for that office before the seventieth session of the General Assembly.

3. Organizational matters

355. The Committee endorsed the agreement of the Legal Subcommittee at its fifty-fourth session, in 2015 (A/AC.105/1090, para. 235), to discontinue the use of unedited transcripts and to use digital recordings on a permanent basis, on the understanding that the digital recording application should be further enhanced.

[4] A/AC.105/2015/CRP.21 and 22 on the composition of the bureaux of the Committee and its subsidiary bodies for the period 2016-2017 were made available to the Committee.

356. In accordance with the decision made by the Committee in 2011 (A/66/20, para. 297), and on the basis of the proposal made at its request by the Secretariat to review the use of unedited transcripts (A/AC.105/C.2/L.282), the Committee agreed to discontinue their use and to use digital recordings on a permanent basis. It also agreed that the digital recording application should be further enhanced.

357. The Committee endorsed the decision of the Scientific and Technical Subcommittee, at its fifty-second session, in 2015 (A/AC.105/1088, para. 275), to revise the criteria established by the Committee at its fifty-fourth session, in 2011 (A/66/20, para. 298), and the agreement by the Subcommittee made at its fiftieth session, in 2013 (A/AC.105/1038, para. 242), in order to secure the time needed for the work of the working groups and to give the Secretariat a clear mandate to implement those criteria. In that regard, the Committee endorsed the recommendation of the Subcommittee that the same criteria should apply, as appropriate, to the organization of work of the Committee, which, like the Subcommittee, regularly had a high number of scientific and technical presentations.

358. The Committee requested the Secretariat to demonstrate to the Scientific and Technical Subcommittee, at its fifty-third session, in 2016, any available technical means of assisting delegations in keeping track of the length of statements and presentations.

359. The Committee requested the Secretariat to make available for the sessions of the Committee and its Subcommittees, in 2016, a compendium containing the rules, procedures and practices, including the processing of documentation, of the Committee and its subsidiary bodies.

4. Draft provisional agenda for the fifty-ninth session of the Committee

360. The Committee recommended that the following items should be considered at its fifty-ninth session, in 2016:

1. Election of officers.
2. General exchange of views.
3. Ways and means of maintaining outer space for peaceful purposes.
4. Report of the Scientific and Technical Subcommittee on its fifty-third session.
5. Report of the Legal Subcommittee on its fifty-fifth session.
6. Space and sustainable development.
7. Spin-off benefits of space technology: review of current status.
8. Space and water.
9. Space and climate change.
10. Use of space technology in the United Nations system.
11. Future role of the Committee.
12. Other matters.

K. Schedule of work of the Committee and its subsidiary bodies

361. The Committee agreed on the following tentative timetable for its session and those of its Subcommittees in 2016:

	Date	*Location*
Scientific and Technical Subcommittee	15 to 26 February 2016	Vienna
Legal Subcommittee	4 to 15 April 2016	Vienna
Committee on the Peaceful Uses of Outer Space	8 to 17 June 2016	Vienna